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AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 5229 Cass Ave., Detroit 2, Mich.

AUGUST 13, 1945

Vol. 45, No. 15, Serial No. 856. Established 1926.

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1945, by Business News Publishing Co.

Inside Dope

By George F. Taubeneck

What Socialism Is
You Can't Eat Promises
Will the Japs Fold?
Small Business Needs
Straight from the Shoulder

What Socialism Is

Now that the British Empire has presided over the liquidation of Winston Churchill, some Americans have expressed alarm over the apparently impending socialization of a portion of Britain's industry.

Fact of the matter is, Britain is so busted there isn't much else she can do. "Socialism" is only a fancy word for "receivership."

Churchill declared he would never be a liquidator, so the people appointed Atlee as receiver.

A "receiver" has to be a dictator, and dictators can function only when they have full control. Centralized control is another synonym for "socialism."

You Can't Eat Promises

After World War I a couple of idealogists named Lenin and Trotsky took over a busted Russia as receivers. They didn't do too well, so a smart management engineer by the name of Stalin picked up the fallen mantle. Under his direction Russia gradually worked its way out of its financial tangles until today it has, in some respects, more of a capitalistic economy than we have here in America.

In 1933 F. D. Roosevelt assumed the receivership of a not-busted-but-badly-bent United States. During his period of control he, too, followed the principles of receivership operation which the intellectuals term "socialization."

Note well: In both cases the receivers "sold" their methods to the people under the guise of "better living standards for all." The people didn't get them, of course, because when you're bankrupt you just *can't* live better than you did when you were solvent. You can't eat propaganda.

Today the British Labor Party is putting out the same old hooey. The people won't get what they're being promised. But if Receiver Atlee is able to work England out of bankruptcy, then the management engineers can take over—just as they have in Russia and the United States.

At this point, the prosperity curve will have a chance to assume a satisfactory rise, during which time people's living standards will rise, too.

Will the Japs Fold?

Frank Hansen recently arrived in this country on a mission for the Australian government in regard to imports of American refrigeration products.

Every American who knows Frank holds him in high affectionate esteem. His ideas and opinions are valued almost as much as are the charm and delight of his personality.

Well, Frank spent a few days with us recently, before going on to Washington. While here, he revealed that highly-informed Australian circles have reason to believe that the Japs will fold up rather suddenly, and much sooner than some people here in America seem to think.

If Frank is wrong, he'll be leaving several neat little piles of greenbacks around at various locations before he departs for Australia. He has made bets with a number of refrigeration industry leaders on a startlingly advanced date for the Jap surrender.

Small Business Needs

Our old friend, Joe Wright, of the University of Illinois writes that executives of 10,000 small businesses *(Concluded on Page 13, Column 1)*

Crosley-Avco Sale In Windup Stage

CINCINNATI—Irving B. Babcock, president of Aviation Corp., was elected president of Crosley Corp. last week, following quick approval by the Federal Communications Commission of Avco's plan to purchase controlling interest in the Crosley company.

Under terms of the purchase contract, Avco will purchase 64% of Crosley Corp. shares from Powel Crosley, Jr., and the Crosley family at $39 a share, involving a payment of more than $12,000,000. The same offer has been made to other Crosley stockholders, and total Avco commit-

(Concluded on Page 29, Column 1)

Westinghouse Buys B. F. Sturtevant Co.

BOSTON—Acquisition of the B. F. Sturtevant Co. here, pioneer in the design and manufacture of air handling and processing equipment, has been announced by A. W. Robertson, chairman of the Westinghouse Electric Corp.

The Sturtevant company becomes a wholly-owned Westinghouse subsidiary, operating as the B. F. Sturtevant Co., a Division of Westinghouse Electric. Management of the Sturtevant company will be assumed by Westinghouse about Sept. 1.

"The Sturtevant company is the

(Concluded on Back Page, Column 1)

Newbell Named Deepfreeze Advertising Manager

CHICAGO — Rhoades V. Newbell, who formerly directed advertising for Magnavox Co., has been appointed advertising and sales promotion manager of Deepfreeze Division, Motor Products Corp., announces F. F. Duggan, general sales manager.

Mr. Newbell's advertising and sales promotion activities will include Deepfreeze home freezers and industrial chilling equipment.

Prior to his connection with Magnavox Mr. Newbell had directed sales and advertising for other manufacturers of major appliances.

Richmond, Va., Asks Water Economizers On Cooling Systems

RICHMOND, Va. — Water economizers must be a part of all air conditioning equipment installed in Richmond in the future, J. Edward Metzger, acting utilities director, announced.

Otherwise, he said, the city will not furnish water for such equipment.

Mr. Metzger said that on three successive days during hot weather in July the city water filtering plant furnished more than 38,000,000 gallons, although its capacity is rated at 27,000,000 gallons per day.

Mr. Metzger said economizers eventually will pay for themselves, although their installations mean an increase of 10 to 15% in original costs.

Without an economizer, an air conditioning unit uses about three gallons per minute for each ton of refrigeration equipment, Mr. Metzger said. He added that an economizer will reduce consumption of water in such cases to five one-hundreths of a gallon for each ton of equipment.

The new rule was established because the peak use of water for air conditioning units occurs at the same time as the peak demand for water for general purposes, he explained.

Retailer Group Prepares Fight On OPA Pricing

WASHINGTON, D. C.—As a result of the separate meetings recently held here by OPA with distributors and dealers to discuss the pricing of reconversion goods, a task committee representing the retailers was appointed to make a thorough study of the absorption of price increases and report back to OPA. Although the retailers stated they would require 30 days to complete their study, OPA stated that it must begin immediately to issue reconversion prices on some products at all levels of sale.

At the meeting with the retailers, of whom there were 32 present, OPA spokesmen said they could not con-

(Concluded on Page 4, Column 2)

Morgan Is Fedders Chief Engineer

BUFFALO — Robert W. Morgan's appointment as chief engineer of the Fedders Mfg. Co., Inc., was recently announced here by E. R. Walker, vice president.

Mr. Morgan received his degree at Rensselaer Polytechnic Institute and his masters degree at Massachusetts Institute of Technology. His experience covers a broad variety of products in the heat transfer and general manufacturing fields.

The Fedders line of products is being expanded for postwar markets covering household and commercial refrigeration, heating, air conditioning, water cooling, automotive radiators, engine and oil coolers for aircraft and other allied products.

Gary Leaves Navy for Henry Valve Co. Post

CHICAGO—Charles V. Gary has received orders for inactive duty in the U. S. Naval Reserve and has returned to Henry Valve Co. here as general manager. Henry Valve Co. manufactures valves, fittings, and other products for the refrigeration industry.

Mr. Gary had served as a lieutenant in the U.S.N.R. since 1942, and for many months prior to being placed on inactive duty had been in the Pacific theater of operations.

First G-E's Are Prewar Models

ERIE, Pa.—The first complete assembly-line production of household electric refrigerators since April 30, 1942, got under way at the General Electric Co.'s plant here Aug. 3.

The first of 95,000 refrigerators to be made by General Electric in 1945, the 7-cubic foot machines that came off the line, were immediately crated and loaded aboard a truck for shipment to warehouses from which they will be distributed to the Army, Navy, and government claimant agencies.

"Production of these refrigerators marks General Electric's resumption of manufacture of major electrical appliances so sorely needed by the public," said H. L. Andrews, vice president in charge of the company's appliance and merchandise department.

"G-E's biggest job still is to build equipment for our armed forces," Mr. Andrews said. "But since government restrictions on some peacetime manufacture have been lifted, we have reconverted any idle assembly lines as quickly as possible.

"Our purpose is twofold: First, to keep our workers employed. Second, to fill the ever growing needs and demands of the public for home appliances."

The refrigerators that came off the assembly line here first are medium-priced models, known as the LB7, suitable for the average family of four or five persons. They have 12.6 square feet of shelf area and make eight pounds, or 80 cubes of ice. They are powered by a permanently oiled, hermetically sealed refrigerating mechanism.

Mounted near the side of the cabinet is a stainless-steel super-freezer

(Concluded on Page 29, Column 2)

Mougey Will Direct Airtemp Advertising

DAYTON, Ohio—Charles R. Mougey, for the past several months assistant advertising manager of Airtemp Division, Chrysler Corp., has been promoted to the post of advertising manager.

Before coming to Airtemp, Mr. Mougey served 10 years as assistant advertising director of the Ohio Fuel Gas Co., producer of natural gas and merchandiser of gas appliances. Previously he had been a publisher and editor of house organs, an advertising agency staff man, and a manufacturer's representative. He is a graduate of Ohio State University.

Housewives Tell What Was Wrong With Prewar Refrigerator Design

ITHACA, N. Y.—Improved facilities for holding ice cream, butter, and frozen desserts, a door latch that can be maneuvered with the elbow or arm when both hands are occupied, and the food storage space high enough to do away with stooping were among the principal suggestions given recently by housewives for improvement in mechanical refrigerators.

Nancy K. Masterman, research associate at the School of Nutrition and New York State College of Home Economics at Cornell University, conducted the survey among housewives here.

Although criticizing the streamlined models which do not have flat tops—causing them to put food on the floor when removing other articles from the refrigerator—the housewives expressed appreciation for the silent mechanism and freedom from frequent repair jobs. Many families seemed to find the 6-cu. ft. refrigerator too small.

Planning their own organization of food in the refrigerator was preferred by many of the housewives to having to follow a food arrangement plan that was fixed in design. They also found fault with evaporators with fixed shelves for ice cube trays, because the space could not be devoted to anything else.

One idea for improving shelf arrangements was the possibility of making half the shelf removable; another advocated shelves that could be pulled out to give easier access to food in the back.

Meat compartments should be large enough to function as such or be eliminated, the housewives indicated. Additional provisions for tall milk bottles were suggested.

Disliked were glass lids for vegetable hydrators and glass shelves because they are hard to clean and easy to break. But the hydrators scored high in popularity for keeping vegetables crisp. Many housewives thought the hydrators should be at least 6 inches deep in order to accommodate heads of cabbage or whole melons.

'Ceiling' Placed On Production of Refrigerators

Industry Can Make 500,000 Units In First '46 Quarter

WASHINGTON, D. C.—Regardless of whether household mechanical refrigerators are produced with or without priorities assistance, production is not permitted to exceed a "secondary ceiling" announced last week by the War Production Board.

This ceiling limits production to 655,000 units in the combined third and fourth quarters of 1945, and 500,000 units in the first quarter of 1946, said WPB.

The refrigeration industry is one of the group of civilian hard goods industries over which production controls will be retained for some time, according to WPB's policy for "Period One" (the period between victory in Europe and victory in Japan).

In view of the current shortage of sheet steel, certain industries with a very large potential use of this metal

(Concluded on Back Page, Column 2)

Haines Heads Commercial Controls Dept. of M-H

MINNEAPOLIS—John E. Haines has been named manager of the newly formed Commercial Controls Department of Minneapolis-Honeywell Regulator Co., according to an announcement made by C. B. Sweatt, vice president. Creation of the department is a part of the reorganization of the company's sales division, and is for the purpose of handling the commercial type of controls, Mr. Sweatt said.

Mr. Sweatt stated that the Com-

(Concluded on Page 29, Column 2)

Carrier's Southeastern Operations Expanded

ATLANTA — To make a bid for what it regards as the "tremendous potential postwar business in the Southeast," Carrier Corp. has quadrupled its staff and office space here.

Personnel in the Atlanta regional office has been increased from eight to 30, and office space has been expanded from 2,500 square feet to 9,000 square feet. The Atlanta office is at 300 Ivy St., N.W.

The greatest postwar field for the expanding air conditioning industry

(Concluded on Page 29, Column 2)

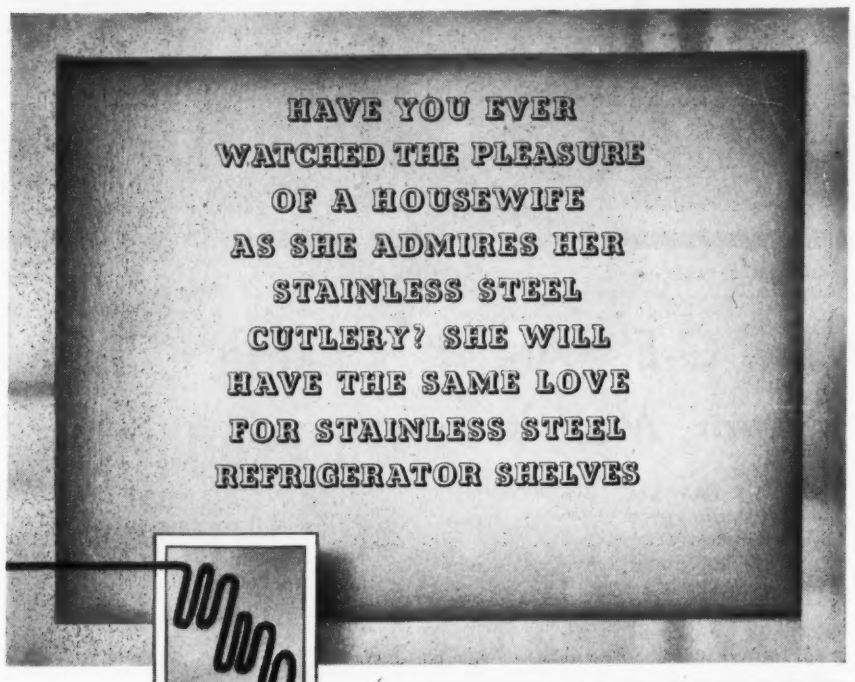
Army Cancels Contract For Gibson Gliders

GREENVILLE, Mich.—Production of Army gliders by Gibson Refrigerator Co. is scheduled to end Aug. 20, following cancellation of an Army Air Corps contract with the company.

Gibson is reportedly trying to have the contract continued until some time in September to provide employment for its 1,500 workers. By that time, production lines would be set up and enough material on hand to resume refrigerator production, the company said.

A new building which will house a continuous porcelain oven for refrigerators is now being erected, it was also announced.

Several weeks ago Gibson's contract for 500 gliders was cut back 40%, and it was now indicated that less than 10% of the original schedule would be completed.



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND TINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Standard Dimensions for Gas Appliances, Kitchen Cabinets Established by 33 Mfrs.

NEW YORK CITY—Standardized dimensions for cabinets, cabinet-sinks, ranges, and refrigerators have been established and agreed upon by 25 manufacturers of gas appliances and eight members of the kitchen cabinet industry, reports H. Vinton Potter, director of the American Gas Association coordinated kitchen program.

Mr. Potter stated that the adoption of this agreement was made in an attempt to facilitate the combination of kitchen units into more functional patterns, and he expressed the hope that the step would simplify kitchen planning both for old and new homes.

The agreement specifies the following standardization of dimensions:

Depth of counter top—25¼ inches, to accommodate the depth of automatic dishwashers.

Depth of base cabinets—24¾ inches, permitting a half inch overhang to avoid spills down front of base.

Height of base cabinets—36 inches, considered standard for woman of average stature.

Depth of toe cove—3 inches, to allow knee room and eliminate toe-stubbing.

Height of toe cove—4 inches, to allow ample room for cleaning underneath.

Height of back rail—4 inches, which is already a practically standard dimension.

Thickness of back rail and counter top—1½ inches, already in general use.

Measurement of base and top cabinet widths will be in multiples of three and will vary from 12 to 39 inches, depending upon the size of the fixture. In this application, Mr. Potter believes that the use of free-standing units, plus filler-strips where gaps occur, will enable home owners to achieve what will be, to all intents and purposes, a custom built model, and at half the price.

It was reported that many utilities companies will establish kitchen planning services in connection with the program, in order to help home owners design kitchens that will provide maximum efficiency and convenience. Under this method, the "add-a-piece" plan can be used by buyers who cannot afford the complete equipment at the start, since the basic units offer flexibility of design and arrangement.

"Packaged kitchens" at specific prices probably will be available, Mr. Potter said, but he thinks that most planners will prefer to use the standard units and make additions as they go along.

In predicting other significant factors in kitchen equipment development, Mr. Potter stated that proper ventilation will be an important consideration. He noted a growing trend toward the use of warm air heating and better insulation, and reported that the gas industry has several experimental ventilating installations already in use. The ventilating theory employed is based on the capture of cooking odors at their source by a ventilator installed so as to surround the range with a blanket of air. Such odors then are removed through the disposition of only a small volume of air.

Standardized dimensions adopted by the manufacturers will not preclude individuality of design and product, Mr. Potter explained.

"Although the height of counter tops has been set at 36 inches," he said, "there will be several individual ways of providing a lower working surface for the needs of a woman of less than average stature.

"One cabinet manufacturer may provide a short counter surface that will drop down 4 to 6 inches between two adjacent base cabinets. If the area beneath this short counter is left open and furnished with a chair, it becomes a desk, or a place where some work may be done while seated. Another manufacturer may have some cabinets with a pull-out shelf 4 to 6 inches beneath the regular top—convenient for a meat-grinder."

Joins Crosley Sales

SIDNEY E. JOHNSON

* * *

Crosley Appoints Johnson Southern Regional Head

CINCINNATI — Appointment of Sidney E. Johnson of Atlanta, Ga., as southern regional manager in the sales department of the manufacturing division of The Crosley Corp., has been announced by James H. Rasmussen, Crosley general sales manager.

Mr. Johnson succeeds Syd D. Camper, who has resigned to become distributor for The Crosley Corp. in Jackson, Miss.

Mr. Johnson has been identified with the household appliance business since 1924. Some of his prior connections as sales promotion manager, were with the Cleveland Electric Illuminating Co., and the Frigidaire division of General Motors in their Cleveland district.

For the past 18 months, Mr. Johnson has been southern district manager for the Faraday Electric Corp. of Adrian, Mich.

"You've got to needle your customers, Joe—that's the way to sell 'em!

—AND WHEN I SAY, 'NEEDLE 'EM,' I DON'T MEAN HIGH PRESSURE"

When I get a prospect for a Crosley, all I do is play the Demonstration Record and let the Floating Jewel* and the Master Tone-Control do the talking. It's the "silence" that gets 'em interested.

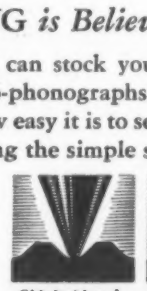
I show them the striking difference between the Floating Jewel* and old-fashioned, rough-riding needles. "This is the system," I tell them, "that says 'Goodbye needle noise.' No more needles to buy, change, or hear."

Then I show them how the Master Tone-Control works with 64 different tone combinations . . . the Rainbow of Sound . . . then I let them select the tone combinations they like best . . . and they listen to recorded music as it should be heard. Yes, I sell 'em . . . but that's not all.

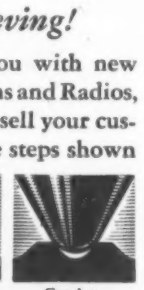
HEARING *is Believing!*

AS SOON AS WE can stock you with new Crosley Radio-phonographs and Radios, you'll discover how easy it is to sell your customers by following the simple steps shown here. The new Crosley line will actually talk for itself . . . sell itself. You can expect every modern improvement and development in radio and electronic engineering plus the amazing Floating Jewel* Tone System and Master Tone-Control. These are features typical of the complete Crosley line of home appliances . . . features that can be seen, heard, or felt and demonstrated. That means easier selling and better profit for you.

*Patented



Old-fashioned sharp needles —"Sera-a-tch! Hi-i-sss! Chatter!"



Crosley Floating Jewel* plays the untouched sides of the groove.

CROSLEY

THE CROSLEY CORPORATION, CINCINNATI 25, OHIO

RADIOS • RADIO-PHONOGRAPHS • FM • TELEVISION • SHORT WAVE • ELECTRONICS • RADAR • REFRIGERATORS • HOME FREEZERS
LAUNDRY EQUIPMENT • RANGES • KITCHEN SINKS & CABINETS • HOME OF WLW, "THE NATION'S STATION"

Not by a long shot. Because my Crosley customers are my best boosters. They are so proud of their new instrument, they can't wait to demonstrate it to their friends . . . and when their friends hear the Crosley, I get a lot of new prospects. So "needle 'em," fella, and you'll do all right.

'Slot Machine' Washer Stations Under Test In Several Cities

NEW YORK CITY — "Stations" where housewives may bring their laundry and have it laundered in a Bendix home laundry unit by dropping a coin in the slot have been established in several cities by Telecoin Corp. here.

The system has been operated for several years in apartment houses, but now the Telecoin company is testing consumer interest by setting up stations in strategic business areas. Here the housewife weighs her laundry, dumps it into the machine, inserts coins, and comes back or waits half an hour to take home the damp wash.

Reports from stations in Bronx, N. Y., South Bend, Ind., and other localities indicate encouraging results, the company says. Chairs and tables are provided in the modern stations for housewives who wish to wait.

SPECIFY . . .

DRYERS THAT BEAR THIS LABEL — CHARGED DAVISON'S IN SILICA GEL OUT WITH

—the label that is your guarantee of maximum performance and satisfaction. Your jobber stocks it—for refilling and in factory charged dryers.

KRACK ENGINEERED

UNIT COOLERS
FIN COILS
AIR CONDITIONING

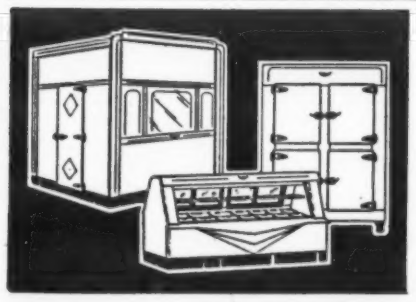
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

COOL DRINKING WATER ALWAYS AVAILABLE

OASIS Electric WATER COOLERS

OASIS means the best in clean, correctly cooled drinking water . . . 24 hours a day year in year out! Made by EBCO . . . pioneers in electric water coolers.

EBCO Mfg. Co.
401 W. Town Street
Columbus, 8, Ohio



GET SET WITH FOGEL

INQUIRE NOW ABOUT OUR COMPLETE LINE

INTERESTING PROPOSITION TO QUALIFIED DISTRIBUTORS

A FEW TERRITORIES STILL AVAILABLE

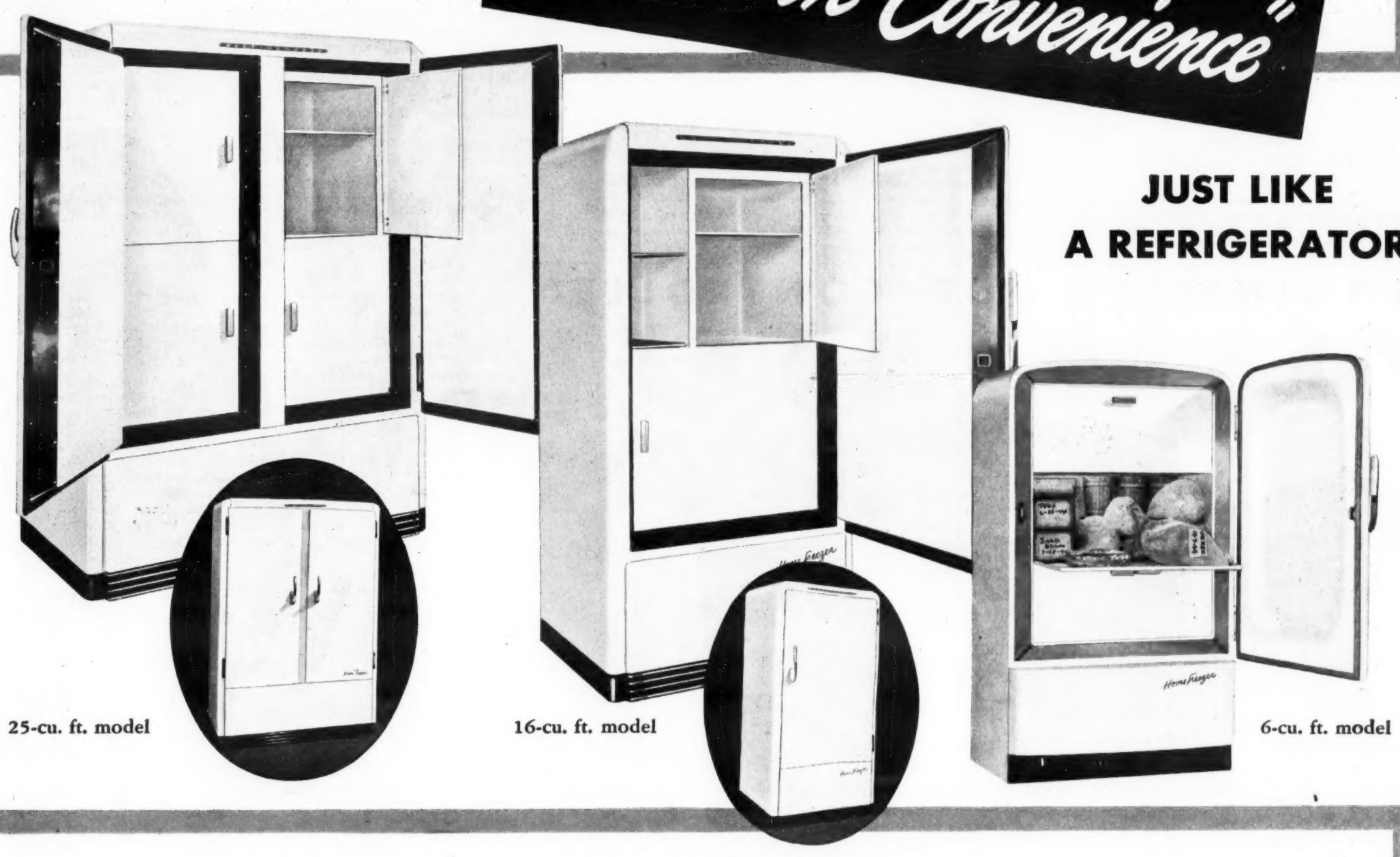
FOGEL REFRIGERATOR COMPANY
5400 Eadom St., Philadelphia 37, Pa.

Westinghouse

Upright HOME FREEZERS

WILL HAVE *"Reach-in Convenience"*

JUST LIKE A REFRIGERATOR



25-cu. ft. model — 16-cu. ft. model — 6-cu. ft. model

Westinghouse will build Home Freezers in three sizes for all city and farm homes

1. All models will be *upright* with front-opening doors.
2. "Reach-in Convenience" makes frozen foods readily accessible.
3. Defrost just like a refrigerator without removing frozen foods.
4. Westinghouse completely hermetically-sealed refrigeration system.

ASK YOUR WESTINGHOUSE DISTRIBUTOR

The *upright* Home Freezer with "Reach-in Convenience" is just one more reason why the Westinghouse Full Line Franchise is "hot". A few territories are still open. Check your Westinghouse Appliance Distributor.

WESTINGHOUSE ELECTRIC CORPORATION
APPLIANCE DIVISION · MANSFIELD, OHIO
Plants in 25 Cities . . . Offices Everywhere

30 MILLION PRE-WAR

Westinghouse

ELECTRIC HOME APPLIANCES

YOUR PROMISE OF STILL FINER ONES TO COME

Tune in John Charles Thomas, Sunday, 2:30 EWT., N.B.C. • Hear Ted Malone, Monday through Friday, 11:45 A.M., EWT., American Broadcasting Co. Network

KRAMER *Radial*
UNIT COOLER
Low Discharge Velocity
High Relative Humidity
Built-in Heat Interchanger
Saves Space
KRAMER TRENTON CO. Trenton 5, N. J.

HUBBELL
YODER
REFRIGERATION PLATES

THE HUBBELL EVAPORATOR PLATE
Every square inch of surface is prime heat pick-up.
For Frozen Food Lockers, Freezer Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc.
Write for complete information. It will pay you.
ENGINEERING SERVICE INC.
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Sole Agents for
THE YODER COMPANY, Fabricating Division
MANUFACTURERS

WOLVERINE TUBE DIVISION
Calumet & Hecla Consolidated Copper Company
1411 CENTRAL AVE., DETROIT 9, MICHIGAN

OPA Pricing--

(Concluded from Page 1, Column 3)

sider any plan that failed to provide for a substantial absorption of the revised manufacturing costs, nor could they say that they had arrived at any absorption percentage figure beyond which OPA considered retailers cannot go.

A representative of WPB, present at the meeting, reported that they do not expect, providing Japan does not suddenly collapse, any great quantity of reconversion goods before the first quarter of 1946. Restrictions on production, said he, are being removed rapidly, but the shortage of manpower and the difficulty of securing materials in the face of the still large requirements of the armed forces, remains a difficult problem. Thus, while 28% of normal refrigeration units has been authorized, it is not anticipated that such a production figure will be reached in the near future.

The OPA spokesman said that cases where manufacturers would be given increases of more than 10% over their 1942 levels would be rare. He cited an 18% increase that had been given manufacturers of radio cabinets, an increase to fabricators of aluminum of 3% on products made from case and 10% on those made from sheet. The increase on washing machines, he said, would be modest.

The general formula stated by OPA for establishing a manufacturing price on an annual volume in excess of $200,000 is roughly as follows: starting from a 1941 base cost, the manufacturer may add his increased material and basic pay rate schedules for productive labor. To this figure he may add one-half the industry-wide profit figure during the 1936-39 period. This gives the reconversion price.

Having established this basis, OPA suggested the measure of the ability to absorb these new costs under different circumstances, as follows:

(a) In the case of merchandise closely related to what has been on store shelves during the war (example: aluminum kitchenware) and not representing the bulk of the store's volume, the measure should be the store-wide or departmental expense rate, as revealed by the latest figures.

(b) On goods of a kind not generally in stock during the war (example: washing machines and refrigerators) OPA suggests a new standard devised for distributors specializing in reconversion products. This standard, said OPA, would require absorption only to a point that would not bring the trade's margin below its prewar realized dollar margin.

In both cases trade-wide figures will be utilized where dollars and cents pricing is invoked. Store by store or departmental figures would be used in most other cases.

Sharp protests were entered by the retailers to the continuing formula from manufacturer to retailer, and arguments were advanced for the adoption of the MPR-580 principle as "something that is based on the realities of distribution."

After being given a short time to bring in a recommendation, the retailers advised OPA that they wanted time to submit a thoughtful study on the question, and further stated that OPA should follow the policy of distributing dollars and cents manufacturing cost increases through distribution levels on an "across the boards" basis.

To this OPA objected, saying they would accept nothing that does not involve substantial absorption. The retailers then promptly pointed out that moving dollars and cents ceilings across the boards from manufacturing to retail levels, reduces the normal return of merchants and constitutes substantial absorption. However, OPA declined to agree, and the meeting adjourned.

The task committee was authorized to make a complete study of the much discussed subject of absorption and make a report within 30 days, including statistical data on the limits to which absorption may be carried and a study of the effect of such a policy on postwar distribution. The committee is actively at work and has already held three meetings.

The meeting with the distributors was well attended by a representative group of both commodity and specialty jobbers. While no committee from this group was appointed, it is understood that those present were not only unanimous but sometimes quite vociferous in their objection to the absorption plan suggested.

OPA stated that, in general, the wholesalers' share of any cost increase to be absorbed would be in proportion to their share of the spread that normally existed between the manufacturers' price and the consumers' price, the remainder to be absorbed by the retailers.

However, it is rumored that OPA suggested a distribution of the increase might be for the distributor to take 30% and the retailer 70%. To this the distributors are said to have replied that their costs have advanced the same as the manufacturers', and if the manufacturers can prove and receive a price increase, the distributors should be entitled to the same consideration.

OPA stated that no final conclusions were reached at the distributor-dealer meetings, and their policy stated at these meetings is subject to change on the basis of suggestions and criticisms received from the trade.

The Retail Reconversion Pricing Task Committee consists of the following:

Dr. Paul H. Nystrom (chairman), Limited Price Variety Stores Association, New York City; M. I. Behrens, Jr., Ludwig-Baumann, New York City; Edgar S. Bellis, Bellis Pharmacy, Bronxville, N. Y.; Louis S. Bing, Jr., The Bing Co., Cleveland; F. J. Griffiths, National Association of Chain Drug Stores, New York City; Lew Hahn, National Retail Dry Goods Association, New York City.

Walter Morrow, Ameican Retail Federation, Washington, D. C.; Paul M. Mulliken, National Retail Farm Equipment Association, St. Louis; Rivers Peterson, National Retail Hardware Association, Indianapolis; Dudley D. Richards, Mail Order Association of America, Washington, D. C.; Theodore Schlesinger, Allied Stores Corp., New York City; Robert A. Seidel, W. T. Grant Co., New York City.

Leo J. Heer, National Retail Furniture Association, Washington, D. C.; H. W. Jacobsen, United Cigar-Whelan Stores Corp., New York City; E. R. McDuff, Grinnell Bros., Detroit; A. Q. Smith, F. W. Woolworth Co., New York City; A. C. Thompson, Associated Merchandising Corp., New York City; Frank H. Trembly, Jr., Philadelphia Gas Works, Philadelphia; Mrs. Ruey S. Messenger, American Retail Federation, Washington, D. C.

Fedders Chief Engineer

ROBERT W. MORGAN

He was recently appointed chief engineer of Fedders Mfg. Co., Inc.

ENGINEERED FOR CONTROLLED
PERFORMANCE

...with Increased Operational Efficiency

Look for shattered *performance* records with Universal Cooler's great new line of Hermetic Refrigerating Units. In addition to pioneering design and better-materials features, consider the sales-worthy advantage for your refrigeration products of an advanced hermetic unit that embodies 3 CONTROLLED circuits—

1. CONTROLLED *lubrication* means a safe supply of oil at all critical points, regardless of oil level.
2. CONTROLLED *refrigerant* circuit prevents refrigerant from slugging and assures quiet operation by maintaining proper mixture of refrigerant vapor and oil over valves.
3. CONTROLLED *electrical* circuit eliminates danger conditions for high voltage, low voltage or electrical overloads of any type.

No wonder leading manufacturers throughout the industry are deciding:

Buy "Let's Ask Universal Cooler"

A NOTE TO MANUFACTURERS: *Information on the complete line of Universal Cooler "case-welded" Hermetic Refrigerating Units is available in a new specifications folder. Write today for your copy!*

WAR BONDS — YOUR BEST INVESTMENT IN THE FUTURE

UNIVERSAL COOLER
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922
MARION, OHIO • BRANTFORD, ONTARIO

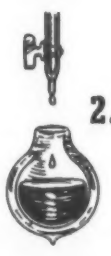
Service Engineers Should Know...

"VIRGINIA" METHYL CHLORIDE IS REALLY LABORATORY TESTED

— the content of each and every container — large or small — is analyzed 3 separate times.

BOILING POINT TEST

1. A measured sample from each cylinder must be water-white in color and when boiled to dryness must record within 25/100 of 1 degree a constant boiling point of minus 23.8°C. This test detects unwanted hydrocarbons, dirt and oil impurities.

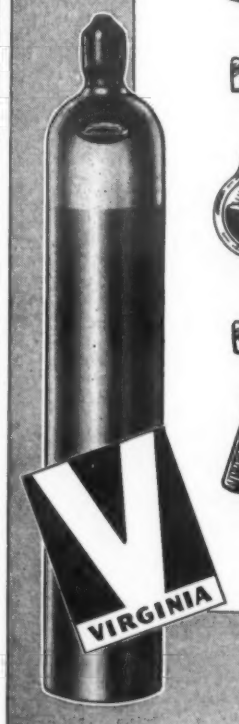


ACIDITY TEST

2. The acid content in a sample of known weight must not exceed 6 parts per million; low acidity prevents copper plating and oil sludging.

MOISTURE TEST

3. The moisture in a sample of known weight must not exceed 80 parts per million; — low moisture prevents freezing at expansion valve and refrigerant break-down.



The name "V-METH-L" on the cylinder is your guarantee of quality. Sold by refrigeration supply jobbers everywhere.

VIRGINIA Smelting Co.
WEST NORFOLK, VA.
76 BEAVER ST., NEW YORK 5 — 131 STATE ST., BOSTON 4
Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"

It's a Matter of Working Together

We believe every sound businessman, whether he has his own firm or is a member of a large organization, works with the same personal goal in mind . . .

The opportunity to have a secure future for himself and his family . . . to earn the friendly warmth and respect of his community . . . to build his business with a sense of permanency.

We believe, too, that the best way of giving our retailers this opportunity is a simple matter of working together . . . of building a partnership with our retailers in the spirit of never letting a good man down.

This belief is the very basis of the Kelvinator way of doing business . . . the reason why membership in the appliance industry's finest retail organization means a personal future . . . a *better* business life.

Every phase of Kelvinator's dealer policy is pointed to this goal . . .

Retail-Minded Distribution—A *selective* dealer organization of not the most, but of the *finest* retailers . . . with an adequate market for every dealer, making possible *more sales per dealer* . . . a policy pointed to protection against shortsighted selling practices. In brief, a business planned for the *long pull.*

Retail-Minded Product Policies—Kelvinator's compact, simplified line reduces the retailer's inventory to the lowest . . . sales efforts are concentrated on high-unit sale, big volume, major appliances.

Competitive Prices—Kelvinator's aim will always be to continue its competitive pricing policy . . . with a proven step-up plan giving tangible, salable values at each step.

Retail-Minded Merchandising—Kelvinator plans all advertising and merchandising with one purpose—moving the merchandise off the retailer's floor *fast* . . . and at a profit.

This is Kelvinator "Retail-Mindedness" in *action* . . . a concept of appliance selling that looks to the business future of each and every Kelvinator Retailer.

The most Valuable Franchise in the Appliance Industry

LOOK AHEAD WITH RETAIL-MINDED

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION

Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing

Nash-Kelvinator's hit musical program Sundays 4:30 P. M., E. W. T. American Broadcasting Company.

Miller Heads Product Service for G-E

JOHN H. MILLER

Recently he was appointed manager of the product service division of General Electric Co.'s appliance and merchandise department, succeeding L. H. Taylor, who was elected vice president of the General Electric Credit Corp. Mr. Miller had been accountant of the traffic appliance division.

Joint Sponsorship of 'Service Unit' Studied By California Furniture Dealer Group

LOS ANGELES — Dealers belonging to the Furniture Retailers Association for Southern California are considering an "Installation and Repair Service" plan under which major appliances and other items sold by member dealers would be set up and serviced by a special troubleshooter unit financed by and working with the dealer in the association.

The idea was presented to the association at its last meeting, after previous discussions had made it plain that most dealers believed that postwar customers are going to demand the best in performance and servicing, and that with the return of close sales competition, the firm that can fill that demand is going to get the most business.

Activities of the service unit, as proposed in the plan, would include installation, adjustment, and repair of appliances during the period of the dealer's responsibility, the repair and refinishing of damaged furniture (whether in the dealer's hands or in the customer's home), the planning and laying of carpets and linoleum, installing Venetian blinds, setting up bunk beds, and such services.

After considerable study of the problem, the committee presented its reasons for belief that such a service unit could do a better job in a shorter time, and for considerable less cost, than an individual dealer or an outside repair organization. No member dealer would pay for the unit's services except as rendered, the plan stipulates.

The unit at first would need a shop with perhaps 5,000 sq. ft. of floor space, and with a competent foreman familiar with every phase of the work, the committee spokesman said. Under him would be one appliance expert, a radio man, a flooring specialist, and two inside and two outside finishers. All would have to be topnotch men.

The plan has worked successfully in Baltimore, the committee reported. There the service unit was able to make two reductions in rates during the first two years.

Final vote on the plan is scheduled for the association's August meeting. Meanwhile a questionnaire with complete details of the proposed plan will be sent to all members for their study, and the committee is working on plans for financing the project, if approved.

OPA Sets Price Ceiling On 2 Hotpoint Units

CHICAGO—Two more models of sealed refrigerator replacement units for the Hotpoint line produced by Edison General Electric Appliance Co., Inc., have been assigned ceiling prices by OPA.

Model FCA-1 is limited to $52.26 on sales to wholesalers, $57.85 on sales to dealers, and $77 to consumers.

Model FCA-2 prices are established at $58.94 to wholesalers, $65.36 to dealers, and $87 to consumers.

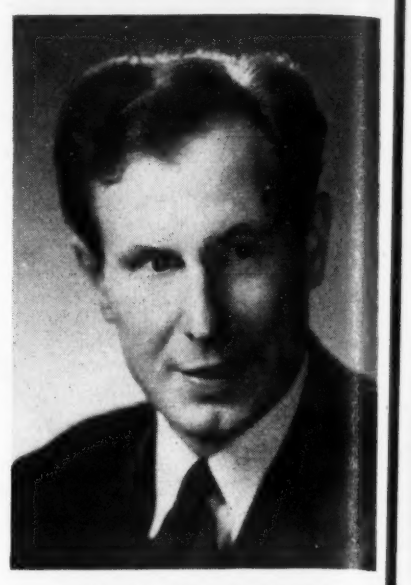
These prices include installation, but dealers are permitted to add $_ to the price if adaptor parts are included in the installation, OPA has ruled.

Laufersweiler Appointed Bendix Branch Manager

CLEVELAND—C. J. Laufersweiler, formerly West Coast sales manager for Bendix Home Appliances, Inc., with headquarters in Seattle, Wash., has been named Cleveland branch manager.

Recently the Cleveland branch was moved to new offices and showrooms which are located at 1027 Prospect Ave.

Airtemp Adv. Chief



CHARLES R. MOUGEY

Now heads the advertising department of Airtemp Division, Chrysler Corp.

Boyd Bullock Is Named Oakes Sales Manager

CHICAGO—Boyd W. Bullock's appointment as general sales manager of Oakes & Co., marketing and merchandising organization here, was recently announced by L. L. Oakes.

Mr. Bullock recently resigned his position as advertising and sales promotion manager of the appliance and merchandise department of General Electric, the post to which he returned after his discharge from active Army service last July.

During his stay in the Army as a Lt. Col. of Infantry, he taught tactics at the Infantry School at Ft. Benning, Ga., and was Chief of Tactics and later commanding officer of the Officers' School at Ft. Custer, Mich.

Spending more than 20 years with General Electric, Mr. Bullock successively engaged in market research, direct mail promotion, industrial advertising and promotion, and directed the company's institutional advertising and broadcasting.

W. A. Friedrich Heads Sales For Hamilton Appliances

TWO RIVERS, Wis. — W. A. Friedrich is the new sales director for the Home Appliance Division of Hamilton Mfg. Co., according to a recent announcement made by Howe G. Evans, vice president in charge of sales for the company.

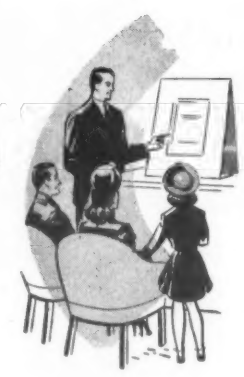
Formerly a Pacific Coast representative of the Charles Bruning Co. Mr. Friedrich joined the Hamilton company in 1939 as field representative in California. In 1941 he became manager of the Washington D. C., office and in January of this year assumed management of the company's New York City office, as well as acting as eastern sales manager.

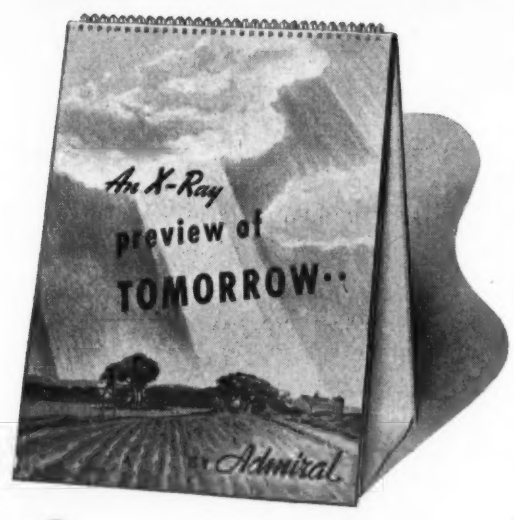
READY *today*...a 3-Step "Package" from

Admiral

To Help You Make Postwar Sales NOW!

1 Step off in the race for postwar sales with ADMIRAL's big, new, 4-piece window display. Invite people into your store *now* for an exciting X-RAY presentation of ADMIRAL postwar merchandise. Display is in full color . . . 48 in. high. "On and off" shadow box illuminates "Slide-A-Way" Radio Phonograph and "Dual-Temp" Freezing Locker.





2 Here's the second step in ADMIRAL's program to help you make postwar sales now: a 28-page, full color book with "X-RAY" views that tell the inside story of ADMIRAL radio-phonographs, record changers, refrigerators, electric ranges and home freezers. Builds *real* consumer acceptance for ADMIRAL products.

The third step: ADMIRAL's new, 16-page, 4-color booklet, "It's a Promise from Admiral." Gives the story of ADMIRAL products and highlights exclusive ADMIRAL selling feature. For use as a mailout or give-away and to supplement your X-RAY presentation of ADMIRAL merchandise. Special counter display card invites customers to ask for a copy. For full information concerning ADMIRAL's 3-step "package," see your nearby ADMIRAL Distributor.

TUNE IN
Every Sunday—Admiral
"World News Today"
CBS, 2:30 P.M. EWT.

Admiral Corporation CHICAGO 47, ILL.

World's Largest Manufacturer of Radio-Phonographs with Automatic Record Changers • Manufacturers of Radios • Refrigerators • Home Freezers • Electric Ranges

GENUINE MAYFLOWER
CONDENSING UNITS AND PARTS
Jobber Inquiries Invited
A complete line backed by nearly a quarter century of user confidence. Write for prices.
MAYFLOWER PRODUCTS, INC.
13 S. 5th St., Richmond, Ind.

Cafeteria Type
WATER COOLERS
FOR MESS HALLS HOSPITALS AND PLANTS
PACKAGED
Remote and Cabinet Models
All Sizes
For all applications
Write for Details
Quick Shipments
FILTRINE MANUFACTURING CO.
53 Lexington Ave. Brooklyn 5, N.Y.
For Over Filtrine HIGH EFFICIENCY 40 Years

These veteran independent distributors are planning a great future for their dealers

NORGE HOUSEHOLD APPLIANCES

Norge Division • Borg-Warner Corporation • Detroit 26, Michigan

In Canada: Addison Industries, Limited, Toronto, Ontario

W. D. V. Hopkins
HOPKINS EQUIPMENT CO., INC.
Atlanta, Ga.

C. H. Buchwald
LINCOLN SALES CORP
Baltimore, Md.

C. A. Rahn
MIDLAND IMPLEMENT CO., INC.
Billings, Mont.

E. D. Henley
BIRMINGHAM ELECTRIC BATTERY CO.
Birmingham, Ala.

L. J. McAllister
L. J. McALLISTER CO.
Boston, Mass.

S. J. Levy
BERGMAN NORGE CO.
Buffalo, N. Y.

A. D. Wall
GAS ENGINE & ELECTRIC CO.
Charleston, S. C.

J. T. Morgan
CHARLESTON ELECTRICAL SUPPLY CO.
Charleston, W. Va.

J. H. Northey
SOUTHERN BEARINGS & PARTS CO.
Charlotte, N. C.

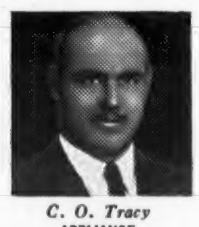
C. H. Clemons
CLEMONS BROS. CO.
Chattanooga, Tenn.

Walter Cayot
CAYOT & WELLMAN
Cheyenne, Wyo.

Peter Sampson
THE SAMPSON CO.
Chicago, Ill.

Harry Knodel
THE HARRY KNODEL DISTRIBUTING CO.
Cincinnati, Ohio

R. C. Hager
THE ARNOLD WHOLESALE CORP.
Cleveland, Ohio



C. O. Tracy
APPLIANCE DISTRIBUTING CO.
Columbus, Ohio

W. J. Schnelle
TEXAS WHOLESALERS, INC.
Dallas, Texas

E. O. Hunting
THE AUTO EQUIPMENT CO.
Denver, Colo.

Dave Burke
RADIO DISTRIBUTING CO.
Detroit, Mich.
Grand Rapids, Mich.

Leo J. Diener
DIENER APPLIANCES
Dubuque, Iowa

H. P. Meyer
IMPERIAL HARDWARE CO., INC.
El Centro, Calif.

J. J. Crouch
CROUCH APPLIANCE CO.
El Paso, Texas

A. B. Gray
THE A. B. GRAY CO.
Fort Wayne, Ind.

W. D. Bacon
GOYER SUPPLY CO.
Greenville, Miss.

W. M. Wood
AUTOMATIC SALES COMPANY
Houston, Texas

J. M. Bloch
THE GIBSON CO.
Indianapolis, Ind.

F. M. Bultman
CAIN & BULTMAN, INC.
Jacksonville, Fla.

F. L. Wallace
SUMMERS HARDWARE & SUPPLY CO.
Johnson City, Tenn.

L. V. Denton
VALLEY APPLIANCES, INC.
Knoxville, Tenn.

Frank Lyon
FRANK LYON CO.
Little Rock, Ark.

Geo. Buechel
THE SUTCLIFFE CO., INC.
Louisville, Ky.

P. F. Crenshaw, Jr.
P. F. CRENSHAW, JR., CO.
Memphis, Tenn.

Wm. Van Domelen
WM. VAN DOMELEN CO.
Menominee, Mich.

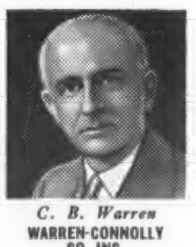
W. H. Roth
ROTH APPLIANCE DISTRIBUTORS, INC.
Milwaukee, Wis.

A. C. Reinhard
REINHARD BROS. CO., INC.
Minneapolis, Minn.
Aberdeen, S. Dak.
Fargo, N. Dak.

B. S. Gambill
BRAID ELECTRIC CO., INC.
Nashville, Tenn.

Max Krich
KRICH-RADISCO, INC.
Newark, N. J.

Geo. Lehleitner
GEO. H. LEHLEITNER & CO., INC.
New Orleans, La.

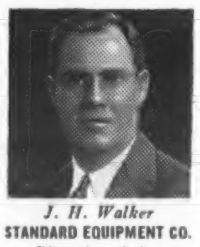


C. B. Warren
WARREN-CONNOLLY CO., INC.
New York, N. Y.

William Mee, Jr.
WILLIAM MEE CO., INC.
Oklahoma City, Okla.

C. L. Carper
SIDLES CO.
Omaha, Nebr.
Des Moines, Iowa

Dave Trilling
TRILLING & MONTAGUE
Philadelphia, Pa.



J. H. Walker
STANDARD EQUIPMENT CO.
Phoenix, Ariz.

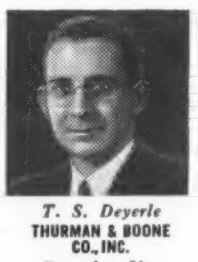
Ludwig Hommel
LUDWIG HOMMEL & CO.
Pittsburgh, Pa.

C. Olesen, Jr.
FARRAR-BROWN CO., INC
Portland, Maine

John J. Moore
JOHN J. MOORE CO.
Providence, R. I.

Mel Runner
NEVADA DISTRIBUTORS, INC.
Reno, Nevada

W. E. Seaton
BENJ. T. CRUMP CO., INC.
Richmond, Va.

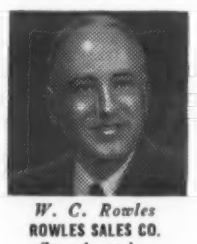


T. S. Deyerle
THURMAN & BOONE CO., INC.
Roanoke, Va.

R. F. Healy
ERSKINE-HEALY, INC.
Rochester, N. Y.

M. B. Lasky
MAYFLOWER SALES CO.
St. Louis, Mo.
Kansas City, Mo.
Wichita, Kans.

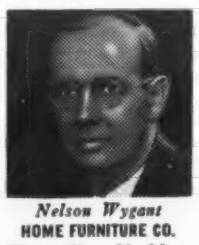
Chas. L. Wheeler
SALT LAKE HARDWARE CO.
Salt Lake City, Utah



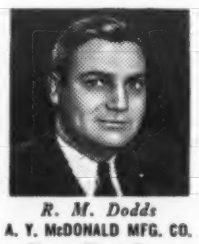
W. C. Rowles
ROWLES SALES CO.
San Antonio, Texas

A. H. Meyer
LEO J. MEYBERG CO., INC.
San Francisco,
Los Angeles, Calif.

K. Connelly
F. B. CONNELLY CO.
Seattle, Wash.
Portland, Ore.



Nelson Wygant
HOME FURNITURE CO.
Silver City, N. Mex.



R. M. Dodds
A. Y. McDONALD MFG. CO.
Sioux City, Iowa

Eric Johnston
COLUMBIA ELECTRIC & MFG. CO.
Spokane, Wash.

B. H. Spinney
B. H. SPINNEY CO.
Springfield, Mass.
Albany, N. Y.
Syracuse, N. Y.

E. G. Turner
TURNER'S, INC.
Springfield, Mo.

V. J. McGranahan
V. J. McGRANAHAN DISTRIBUTING CO.
Toledo, Ohio

W. E. O'Connor
SOUTHERN WHOLESALERS, INC.
Washington, D. C.

H. M. Winner
NEYHART'S, INC.
Williamsport, Pa.

SEE NORGE BEFORE YOU BUY

Prices Set on 11 Victor Milk Cooler Models

HAGERSTOWN, Md. — Maximum prices on 11 models of milk coolers produced by Victor Products Corp. here have been established by OPA. Prices range from $237 to $493, to which may be added freight and actual crating charges, not to exceed $6.

Prices to distributors, dealers, and consumers for the 11 models are shown in the following table:

VICTOR PRODUCTS CORP.

Model	Compressor	On sales to distributors	On sales to dealers	On sales to consumers
LC-3	CM 345B ¼ hp.	$142.30	$178.00	$237.00
LC-4	CM 345B ¼ hp.	155.50	194.50	259.00
LC-4S	CM 345B ¼ hp.	155.50	194.50	259.00
LC-4	CM 345B ¼ hp.	161.00	201.50	268.50
LC-4S	CM 345B ¼ hp.	161.00	201.50	268.50
LC-6	CM 345B ¼ hp.	176.00	220.00	293.50
LC-6	CM 365C ⅓ hp.	186.50	233.00	311.00
LC-8	CM 365D ½ hp.	217.50	272.00	362.50
LC-10	CM 365D ½ hp.	236.60	296.00	394.50
LC-10	CM 43 B ½ hp.	252.00	315.00	420.00
LC-12	CM 43 B ¾ hp.	295.80	370.00	493.00

Universal Cooler Nets $19,167 For Quarter

MARION, Ohio—Universal Cooler Corp. reports sales of $1,890,165 and a net profit of $19,167 after provision of $91,000 for federal income and excess profits taxes for the quarter ended June 30.

For the same period last year, sales were $2,414,345 with a net profit of $43,090 after provision of $168,700 for taxes.

The corporation's fiscal year ends Sept. 30, and for the nine month period to June 30, the report shows sales of $6,660,132 and a net profit of $145,339, compared with sales of $9,605,004 and a net profit for the same period of the preceding year of $224,423.

RECENT LEGAL DECISIONS Affecting Refrigeration & Air Conditioning Fields

Approximately 90% of all lawsuits involving companies or individuals in the refrigeration, appliance, and air conditioning fields result from a lack of knowledge of the elementary principles of modern law, declares Leo T. Parker, Cincinnati attorney who analyzes and writes on litigation in various industries.

Mr. Parker in this series of articles reviews some of the more recent higher court decisions on lawsuits which have involved business matters and practices in the refrigeration, appliance, and air conditioning fields.

Representative Sues for Commissions

Generally speaking, a sales representative is entitled to sue and recover all commissions on sales made according to contract. The higher court may modify the judgment of the lower court on new testimony.

For example, in Maurice F. Simon v. Noma Electric Corp., 53 N. E. (2d) 579, reported February, 1944, it was shown that a sales representative sued the Noma Electric Corp., Air Conditioners Sales Corp., and others to recover commissions.

From a judgment for the sales representative for $7,640.13 against the Noma Electric Corp., Air Conditioners Sales Corp., and others for $15,915 they appealed to the higher court. This higher court however reduced the verdict to $15,290, in view of testimony which indicated that the judgment of the lower court was $625 too much.

Tenant Liable on Lease

Modern higher courts consistently hold that absolute impossibility of a tenant to fulfill the terms of a lease contract may entitle the tenant to cancel the lease. However, the occurrence of something which merely interferes with completion of a lease contract will not relieve the tenant from liability.

For illustration, in Nickolopulos v. Lehrer, 40 Atl. (2d) 794, reported March, 1945, it was shown that a landlord sued a tenant to recover rentals under a lease contract.

The tenant attempted to avoid liability on the grounds (1) that when he had made the lease the landlord knew that he intended selling refrigerating equipment; and (2) Federal orders and regulations prevented him from continuing a profitable business whereby it was impossible for him to complete the lease contract.

The higher court refused to agree with these contentions and in holding the tenant fully liable on the lease contract said that mere impairment of the beneficial use of lease premises is not sufficient to warrant termination of a lease.

Cold Storage of Salad Oil Improves Products

TERRELL, Tex.—Refrigeration of salad oil, a new application of refrigeration equipment in the Wheatley Mayonnaise Co., Inc., is reported as highly satisfactory by Dave Wheatley, branch manager of the plant here.

Chrysler Airtemp equipment furnishes refrigeration for cooling the coils in the storage vault, as well as the oil in the reserve tank.

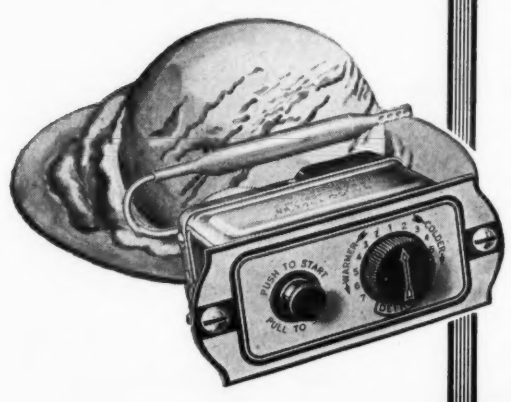
"We have found that salad oil storage between 40° and 60° pays in product quality and customer satisfaction. All oil used in our product is now refrigerated," said Mr. Wheatley.

Refrigeration makes possible a product that appears smooth and "dry" in contrast to a thin, "greasy" appearance of products made of oil from ordinary storage. It has greatly increased the potential shelf life of Wheatley products and prevents breakdown and separation at point of sale, he continued.

Success of the installation in Wheatley Mayonnaise Co.'s Texas plant has prompted the ordering of similar equipment for its Louisville, Ky., plant, it was reported.

USE *Ranco* 414 *Control* FOR ICE CREAM CABINETS

for dependable protection of ice cream



Win the good will of your ice cream cabinet customers by installing a Ranco 414 Control. It assures constant protection of their ice cream at the right temperature for quick, easy handling.

Sturdily built of finest material, checked progressively in each step of manufacture by precision inspection, a Ranco Control is a superbly sensitive and accurate instrument capable of long service. Easily adjusted to the desired temperature.

See your Ranco Jobber for the Ranco 414 and other available commercial and domestic controls.

Ranco Inc. COLUMBUS 1, OHIO

To Meet Your Refrigeration needs

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DU PONT METHYL CHLORIDE

99.5% PURE DRY UNIFORM

HIGH-PURITY Du Pont Methyl Chloride will fit your refrigeration requirements!

ORDER NOW—But don't hoard!

HELP YOURSELF AND OTHERS—Return empty cylinders promptly! Your cooperation will help assure fast deliveries! E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

SPEED VICTORY—BUY MORE WAR BONDS

DU PONT METHYL CHLORIDE SPECIFICATIONS

Purity	99.5% Methyl Chloride
Moisture	0.008% by wgt. max.
Acid as (HCl)	0.001% by wgt. max.
Residue on Evaporation	0.01% by wgt. max.
Boiling Range (760mm)	—24.6° to—23.6°C.
Color	water white, clear

DU PONT ELECTROCHEMICALS

DU PONT BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY

NIBCO WROT Fittings are formed in one step from straight copper tubing. They are strong, light in weight and dense in structure . . . impervious to gases. Because every fitting is perfectly formed and absolutely "round and square," they are easier to use in production. Laboratory Control and individual plug testing assure close tolerances. You can eliminate service troubles by using vibration-proof and corrosion-proof NIBCO WROT Fittings. Write for complete catalog.

NORTHERN INDIANA BRASS CO.

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"DETROIT" VALVES HAVE UNIVERSAL ACCEPTANCE AMONG REFRIGERATION MEN

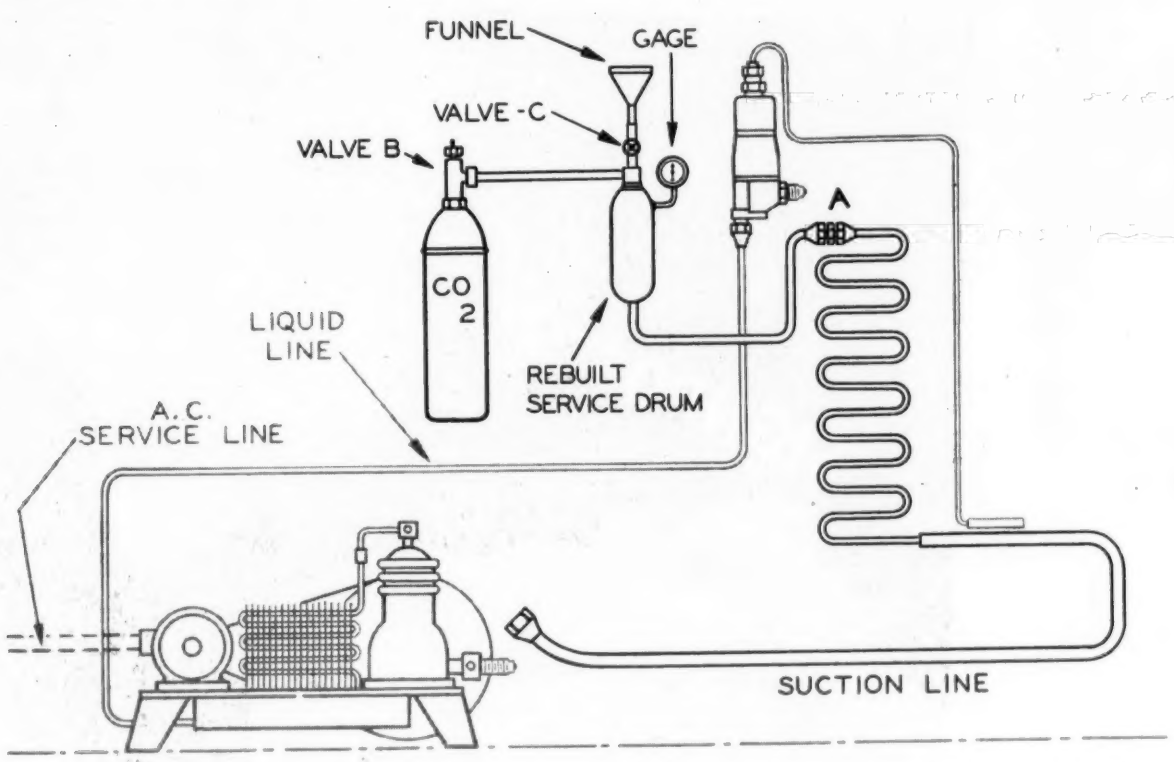
Refrigeration men everywhere know "Detroit" Expansion and Solenoid Valves. They are all familiar with "Detroit" reliability. They're better valves due to better design—higher quality materials and workmanship.

Drying the Evaporator and Refrigerant Lines with CO_2 Gas and Alcohol

No. 5 of a Series

When an expansion valve freeze-up due to moisture is corrected by applying heat to the valve body, the moisture passes into the evaporator and forms ice. It does not stay in the evaporator permanently as ice, however, but sublimes and continually circulates through the system and will eventually cause another freeze-up at the expansion valve. Therefore, moisture should be REMOVED from the system to insure trouble-free operation.

Carbon dioxide—CO_2—in combination with pure methyl alcohol provides a useful means of drying out an evaporator.



CO_2 has the advantage of being easily obtainable in drums—it is relatively inexpensive, and it is dry. In addition it is practically inert and will not harm the system.

One precaution should be taken. When attaching a new drum of CO_2 to a system, first turn the drum upside down—let it stand for 5 minutes, and then bleed off a little of the gas through the valve. If any moisture happens to be in the drum, it will come out with this gas.

With the equipment shown in the diagram, the following method of drying the evaporator and refrigerant lines is recommended.

NOTE: The rebuilt service drum is made from a standard refrigerant drum (approximately 4" dia. x 12" long) with welded pipe and gauge connections as shown.

PROCEDURE: **1.** Disconnect evaporator at both ends (expansion valve not in circuit) and allow it to warm to room temperature.

2. Make connection "A" to evaporator inlet.

3. With coil outlet connection open to atmosphere, close valve "C", open valve "B" until gauge shows approximately 200 psi and blow coil out thoroughly.

4. Close valve "B", open valve "C" and pour one quart of *pure methyl* alcohol into service drum through funnel.

5. Close valve "C" and repeat step 3. Allow CO_2 to blow through until alcohol is cleared from evaporator and lines.

6. Apply torch to service drum, while CO_2 is flowing, to heat coil and evaporate all the alcohol.

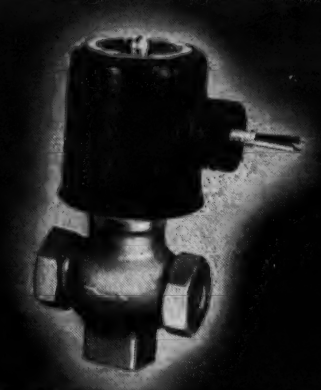
7. Reassemble system immediately, before evaporator cools down. If system is not to be reassembled at once, cap BOTH ends of the evaporator, to prevent moisture from re-entering.

8. Apply permanent dryer when reassembling system.

9. Evacuate system thoroughly with system compressor before opening liquid valves.

DETROIT LUBRICATOR COMPANY Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Reprints of these articles, punched to fit your service book, available on request. Write for your copy.



No. 683-3—This reliable valve, like all "DL" solenoids is designed for use with any fluid that will not attack brass. Furnished with three sizes of orifices, 1/8", 3/16" and 7/32".

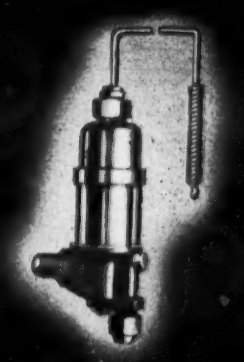
Nominal capacity—liquid line

1/8" orifice 1-1/3 tons Freon 2-3/4 tons Methyl
3/16" orifice 3 tons Freon 6-1/2 tons Methyl
7/32" orifice 3-3/4 tons Freon 8-3/4 tons Methyl
3/8" female N.P.T. connections.

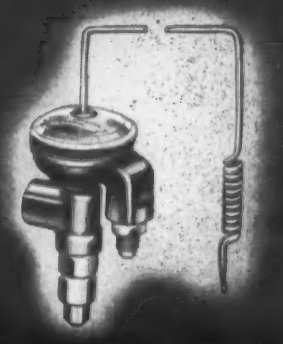
No. 686—The No. 686 is a heavy duty, large capacity pilot operated valve which requires a pressure drop of 1-3/4 psi to operate the piston when used with refrigerants, 5 psi on water. It is made with 2 sizes of orifices, 1/2" and 5/8". Available threaded or flanged for various size tail pipes.

Nominal capacity—liquid line

1/2" orifice	11 tons Freon	23 tons Methyl
5/8" orifice	17 tons Freon	34 tons Methyl



No. 673—Thermostatic Expansion Valve. For many years the standard of the refrigeration industry. Nominal capacity—1.2 tons on Freon, 2.1 tons on methyl.



No. 893—Thermostatic Expansion Valve is of the adjustable type. Rated at 1/2 ton Freon, .9 ton methyl. Inlet 1/4" or 3/8" SAE. Outlet 1/4" female, IPT, 3/8" or 1/2" SAE. Regularly supplied with strainer at inlet.

DETROIT LUBRICATOR COMPANY

General Offices: 5800 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

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EVAPORATIVE CONDENSERS
FORCED CONVECTION UNITS
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Our engineering department is at your service. Let us help you with your problems.

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JACKSON · MICHIGAN

10 Freezer Manufacturers Assigned Prices by OPA

WASHINGTON, D. C.—Prices on 24 models of home and farm freezers to be produced by a total of 10 manufacturers have been established by OPA. Prices range from $236 to $900.

The manufacturers include Chapman Mfg. Co., which will make one model; City Refrigerator Co., three models; Franklin Transformer Mfg. Co., four models; Manitowoc Ship Building Co., one model; Schmit Construction Co., six models; Macnel Mfg. Co., one model; L. E. Nelson Co., two models; Stanley Knight Corp., one model; Amana Society, one model; and Refrigeration Corp. of America, four models.

Chapman freezer is described as a 12.13-cu. ft. box powered by a ¼-hp. condensing unit. Manufacturer's price to wholesalers is set at $180; to dealers, $216.; to consumers, $360, plus actual crating charges not to exceed $6, and freight charges.

Model H-10, produced by Manitowoc Ship Building Co., is a 10.3-cu. ft. freezer equipped with a ¼-hp. condensing unit. Ceiling price to wholesalers is $150; to dealers, $180; to consumers, $300.

The Macnel freezer is listed at 20.1 cu. ft. powered by a ⅓-hp. condensing unit. Price to distributors is $330; to dealers, $396; to consumers, $660.

A 16-cu. ft. unit with a ¼-hp. condensing unit is planned by Stanley Knight Corp. with price to distributors set at $280; to dealers, $336; to consumers, $560.

Amana Society's home freezer Model No. 200 is priced by OPA at $557.20 to distributors; $696.50 to dealers; $995 to consumers.

Prices of the freezers produced by the Franklin, Schmit, City Refrigerator, Refrigeration Corp., and Nelson companies are shown in the accompanying table.

OPA Ceiling Prices on Home and Farm Freezers

CITY REFRIGERATOR CO.

Size	On sales to distributors	On sales to dealers	On sales to consumers	Maximum crating charges
16 cu. ft. ⅓ hp. condensing unit	$250	$300	$500	$8
12 cu. ft. ¼ hp. condensing unit	210	252	420	4
8 cu. ft. ¼ hp. condensing unit	160	192	320	4

FRANKLIN TRANSFORMER MFG. CO.

Item	Size	On sales to distributors	On sales to dealers	On sales to consumers	Maximum crating charges
Model 4	4 cu. ft. with ⅛ hp. condensing unit	$118.00	$141.60	$236.00	$4
Model 6	6 cu. ft. with ⅛ hp. condensing unit	144.00	172.80	288.00	4
Model 8	8 cu. ft. with ⅛ hp. condensing unit	168.00	201.60	336.00	4
Model 16	16 cu. ft. with ⅓ hp. condensing unit	231.50	277.80	463.00	6

L. E. NELSON CO.

Size	On sales to distributors	On sales to dealers	On sales to consumers
20 cu. ft. with ⅓ hp. condensing unit	$270	$324	$540
35 cu. ft. with ½ hp. condensing unit	372	446	744

REFRIGERATION CORP. OF AMERICA

Model	Item	On sales to distributors	On sales to dealers	On sales to consumers	Maximum crating charges
300	6 cu. ft. with ⅛ hp. condensing unit	$180	$192	$320	$4
500	10 cu. ft. with ⅛ hp. condensing unit	200	240	400	6
700	14 cu. ft. with ⅛ hp. condensing unit	275	316	530	6
1000	20 cu. ft. with ⅛ hp. condensing unit	330	396	660	6

SCHMIT CONSTRUCTION CO.

Model and size	On sales to distributors	On sales to dealers	On sales to consumers	Maximum crating charges
LD, 10 cu. ft. with ¼ hp. condensing unit	$200	$240	$400	$6
LD, 15 cu. ft. with ¼ hp. condensing unit	250	300	500	6
LD, 20 cu. ft. with ⅓ hp. condensing unit	300	360	600	6
SC, 30 cu. ft. with ⅓ hp. condensing unit	350	420	700	6
RC, 40 cu. ft. with ½ hp. condensing unit	400	480	800	6
RC, 50 cu. ft. with ¾ hp. condensing unit	450	540	900	6

BUILD LASTING CUSTOMER GOOD-WILL WITH THE QUALITY BUILT

BEN-HUR

"Farm and Home" Freezers

Engineered TO GIVE LASTING, TROUBLE-FREE SERVICE AND SATISFACTION . . .

"QUALITY is remembered long after PRICE is forgotten" is a truth that applies particularly to freezers for the farm and home. Today, with a great and widespread public interest in home freezing units, it is highly important for distributors and dealers to choose a line that insures these *essential* features:

★ **CONSTRUCTION THAT IS SOUND** and Durable, with long-lasting, properly built-in insulation.

★ **LABORATORY TESTED** — Under All Conceivable Operating Conditions.

★ **DESIGN THAT IS PRACTICAL** — efficiently planned for conveniently accessible storage.

★ **ENGINEERED** and Perfected by Leading Refrigeration Experts — to assure continuously dependable operation.

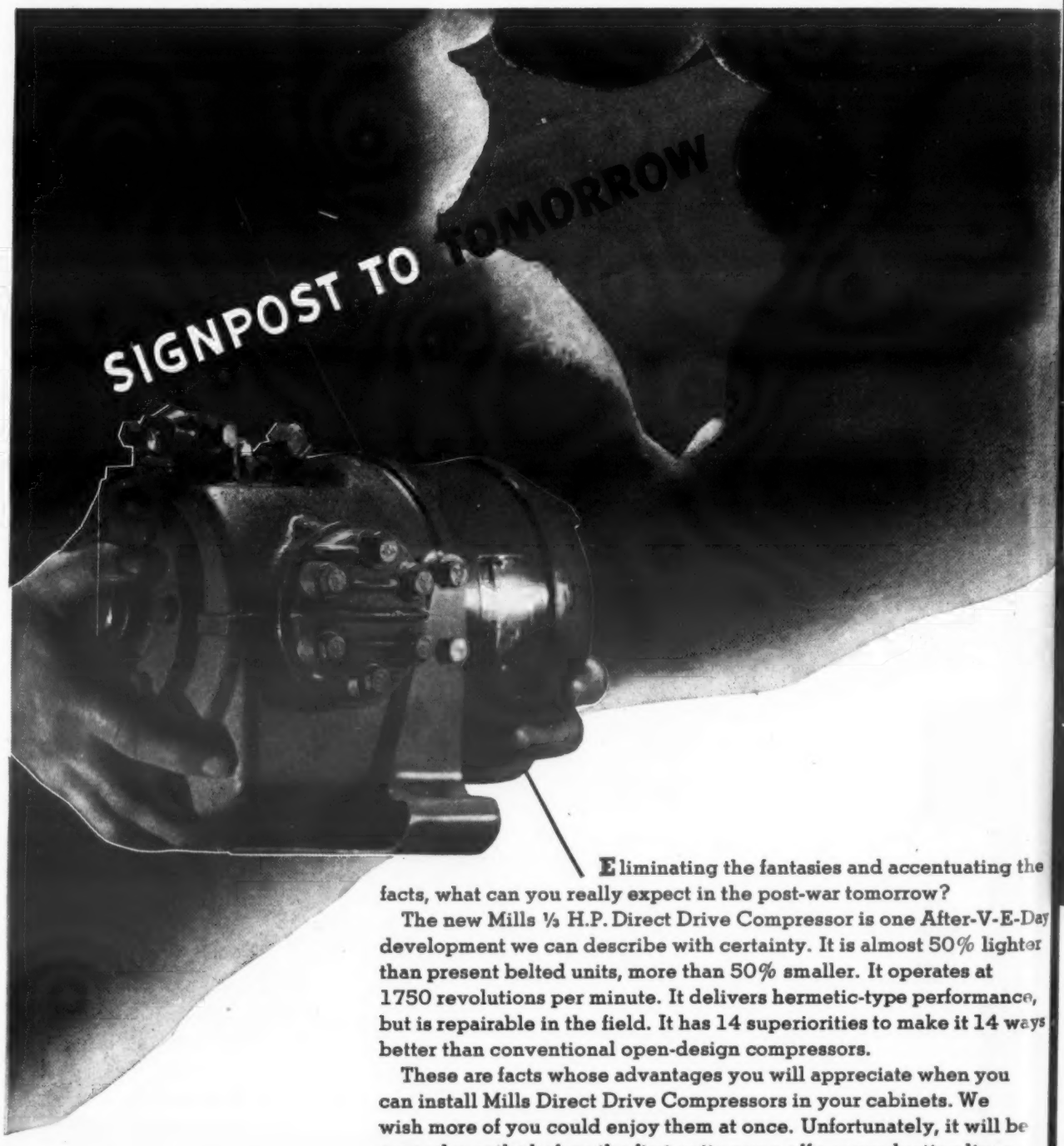
★ **COMPLETE SIZE RANGE** — Meeting All Family Needs — City or Country.

Write for full particulars TODAY.

BEN-HUR MANUFACTURING CO.
634 EAST KEEFE AVENUE — MILWAUKEE 12, WISCONSIN

BEN-HUR *Farm and Home Freezers* assure you all of these features — and many additional refinements and operating improvements resulting from the Third of a Century of quality manufacturing experience behind the "BEN-HUR" name. All of which adds up to customer satisfaction — plus PROFITS for you!

BEN-HUR FARM & HOME FREEZERS



Eliminating the fantasies and accentuating the facts, what can you really expect in the post-war tomorrow?

The new Mills ⅓ H.P. Direct Drive Compressor is one After-V-E-Day development we can describe with certainty. It is almost 50% lighter than present belted units, more than 50% smaller. It operates at 1750 revolutions per minute. It delivers hermetic-type performance, but is repairable in the field. It has 14 superiorities to make it 14 ways better than conventional open-design compressors.

These are facts whose advantages you will appreciate when you can install Mills Direct Drive Compressors in your cabinets. We wish more of you could enjoy them at once. Unfortunately, it will be several months before the first units come off our production lines, and then quantities will necessarily be limited. Only a very few manufacturers can be accommodated in the first year of fabrication.

However, this engineering achievement is a signpost to Mills developments for tomorrow. It points toward things to come. Your own plans for the future wisely can be integrated with this and other accomplishments of Mills Engineering.

MILLS INDUSTRIES, INCORPORATED
4100 FULLERTON AVENUE, CHICAGO 39, ILLINOIS

Freezing Cabinets Up Penicillin Production

ST. LOUIS—Freezing cabinets designed and made by the Ideal Cooler Co here, have made mass production of penicillin possible at a rate never reached before.

Commercial production in one of the largest penicillin plants in the world was begun a year ago in Terre Haute, Ind., by the Commercial Solvent Corp. The freezing step was carried out at that time by partly submerging the small bottles containing the penicillin solution in subzero alcohol.

That method of freezing proved too slow for the production schedule, however, even when more units were added. The mechanics of removing the bottles from the special trays required, and of drying them off (heat could not be used) before being placed in vacuum driers for evaporating the solution itself, took an exorbitant amount of time.

The corporation asked Louis Weiss, owner of the Ideal Cooler Co., to design a low-temperature unit that could do the job. Major requirement: Room-temperature solutions must be brought down to -50° F. in an hour and a half.

Ideal had made industrial refrigerating cabinets before the war, and since Pearl Harbor have been producing low-temperature cabinets, designed by Mr. Weiss, for the shrinking of airplane metals, for treating blood plasma, and for radar equipment.

Mr. Weiss came back with blueprints for a cabinet he thought could do the job, and three of them were built before the close of the year. They pulled down to -50° in less than an hour, and if needed could go on down to -115°.

Each cabinet holds more than 2,000 penicillin bottles, set on 12 trays. Refrigerating coils are under each tray, and little moisture within the cabinet minimizes later drying of the bottles.

An English concern about to begin mass production of penicillin for the British government recently ordered three of the cabinets for its work.

General Controls Appoints Kneese Dallas Manager

DALLAS, Tex.—W. C. Kneese has been appointed manager of the Dallas factory branch of General Controls Co.

Mr. Kneese has had over 10 years' experience as purchasing agent and accountant in the wholesale plumbing and hardware business and with Associated Mechanical Contractors. He will serve users of automatic controls in the heating, refrigeration, aircraft, and industrial fields throughout the northern half of Texas, Oklahoma, and Arkansas.

Jap Refrigeration Unit Found on Okinawa Proves Crude Imitation of U.S. Machines

By W. Henry Knowlton

NAHA, Okinawa—Near the center of this demolished former capital of the Ruyuku Islands stands a stark reminder of former Japanese domination—a low pressure refrigeration machine of approximately 3 to 5-hp capacity.

A crude imitation of standard open-type American models, the compressor has single cylinder mounted with multiple V-belt drive with the receiver mounted in the base. The condenser is housed in a heavy iron housing between the motor and cylinder. A pressure control mounted on the top of the condenser resembles the very crude devices used in the early days of refrigeration in America. Certainly no American control manufacturer would want to claim it as his product.

The machine was built, according to the legend on the receiver, by Kokuek Ice Machine. The electric motor is a product of Kitachi Motor, Kurme, Japan. Both the receiver and motor were plainly labeled in English letters, evidently a common practice, as most Japanese commercial products carry similar markings.

I discovered the Japanese low pressure machine soon after the Japs vacated the ruined city. It stands near the front of a space evidently occupied by a store, but it is impossible to tell whether it was an ice cream store, dairy, or market of some type, as the building is completely gone. Why the machine was untouched by bombs, shell fire from naval ships, and artillery is a mystery, when only the outer shell of a few nearby buildings were left standing. It is noteworthy that the unit was located near the front of the store, where the machine was evidently on display while in operation, indicating that the owner was getting advertising value out of its use.

After looking at this crude imitation of an American refrigeration unit found on Okinawa, W. Henry Knowlton concluded that it had been located near the front of some type of store to attract customers.

HIGH SUCTION PROCESS WATER COOLERS

25 to 150 gallon storage capacities.

135 to 1000 G. P. H. recovery capacities.

Suitable for bakery ingredient, jacket cooling, film processing air conditioning or other commercial cooling.

Available with or without agitator pumps.

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Fresh beef for our troops in India and Burma —that's impossible! But, leave it to the refrigeration industry to solve these "tough" problems—and keep our fighting troops healthy. Special equipment had to be designed, for cold-storage warehouses, refrigerated ships, cars and trucks, but the refrigeration industry took them all in stride and came up with the answers—and the boys get fresh beef *three times a week.*

Wartime accomplishments like these will mean "great things" to come, for the peacetime air conditioning and refrigeration industry.

KEROTEST MANUFACTURING COMPANY
Pittsburgh, Penna.

Come to Headquarters for the new Developments on Valves and Fittings

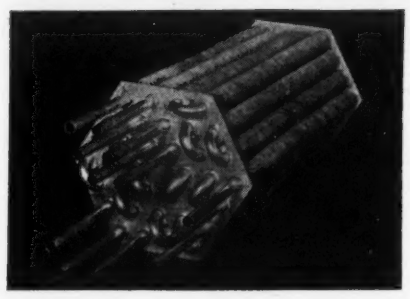
"Kerotest is one of just fifteen manufacturers to receive the Fifth Star and final award for their Maritime Flag"

for

LET KEROTEST SERVE YOU.

KEROTEST { AIR CONDITIONING And REFRIGERATION

ROME-CONDENSER
★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

$26 Million Market in Buffalo for Postwar Appliances Seen by Non-Selling Utility

BUFFALO—Counting on an estimated five-year postwar electrical appliance market in metropolitan Buffalo totaling at least $26,000,000, the Buffalo Niagara Electric Corp. is mapping extensive plans to help dealers and distributors cash in on these sales "probabilities," according to Howard M. Sharp, manager of the utility's residence and farm bureau.

Some time ago the utility announced that it will not merchandise appliances after the war, at least for two or three years, since it believes dealers and distributors should have little difficulty in doing a satisfactory sales job, certainly in the immediate postwar period.

"Instead of selling electrical appliances directly, we will concentrate on selling electrical service through a broad 'mass education' campaign," explains Mr. Sharp.

"Our advertising schedule has always been extensive and it will continue so, telling the advantages of electric service and creating a desire for electrical products."

The utility will likewise continue its heavy direct mail program and will distribute educational literature through public lectures, demonstrations, and on the display floors.

Home service workers will be putting on demonstrations in dealer's stores or in the distributors' headquarters, but here is one operation where the utility's no-selling plan will change former practices.

For these demonstrations, the dealer and/or the distributor will have to line up the customer-prospects, said Mr. Sharp.

"We plan to set up a program also to train salesmen for the dealer," said Mr. Sharp, adding that "we'll have to retrain our own people to sell electrical service. A veteran specialty selling man who 'knows all the answers' will handle this.

"Dealers will probably have quite a problem in this respect, for we anticipate they will be faced with a heavy personnel turnover at first. Many persons, including war veterans, will probably want to get into the appliance business as salesmen, and may decide after a short while that they don't like it, or perhaps aren't fitted for it.

"If enough war veterans show signs of being interested in becoming salesmen in this field, we may set up a six to eight-week training course especially for them," he added.

Starting point of Buffalo Niagara Electric Corp.'s extensive postwar promotion plan is its estimate of a $26 million appliance sales potential in metropolitan Buffalo for the first five years that appliances are available postwar to meet demands.

Results were compiled from questionnaires sent to several thousand of the 168,000 residential users of electricity in this area.

Leader in both unit sales and potential dollar volume was the household refrigerator. Sales of 39,000 units for $6,844,500 to 23.2% of the customers were indicated.

Second in both popularity and dollars, was the conventional washer, which, according to the survey, interests 18.4% of the utility's customers, representing 30,900 sales at $2,765,550. Automatic washers received surprisingly few votes, the utility thinks.

Some 7,500 sales worth $1,012,500 were shown on the survey, but the utility thinks this figure will probably be increased. This considerable spread between conventional and automatic washer prospects for postwar sales can be explained, says the utility, "because the automatic machine is not generally well known, as it appeared on the appliance market shortly before the war started.

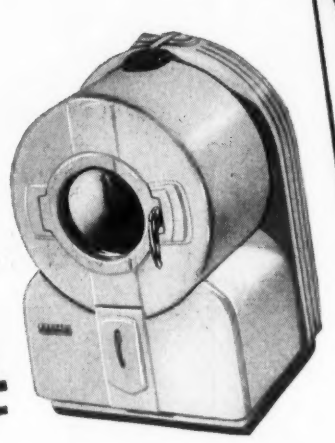
"Therefore, we say that it is necessary to consider the [public] acceptance of an appliance . . . to get a true perspective of the market. This should indicate a good condition because it follows logically that as the future sale of appliances increases the percentage of saturation, it will, in the same proportion, increase the potential market for those appliances."

Conventional washers in the Buffalo metropolitan area have a saturation of 65.9%, while automatic washers are rated at only 5.8%. Further substantiating the utility's contention that higher saturation means greater public acceptance and therefore more sales is the refrigeration picture, where the saturation figure is given as 69.9%, the highest of major appliances, and the postwar sales figure as 39,000 units. the highest in both the major and small appliance fields.

Buffalo Sales Prospects for 5 Postwar Years

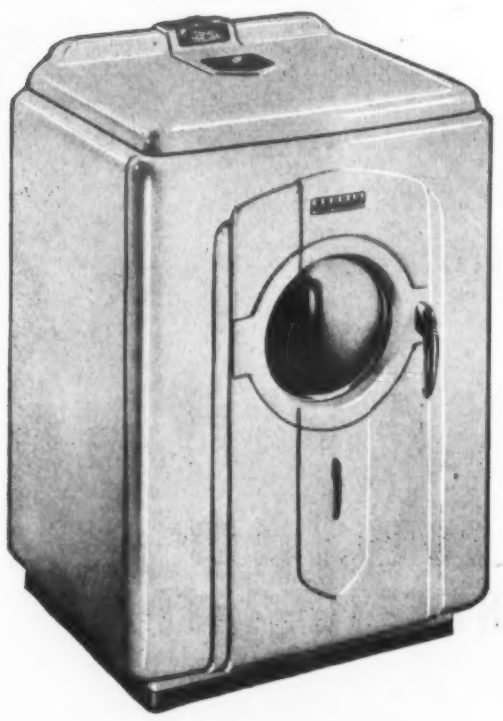
Electrical Appliances	Present Saturation	Potential Market	Sales Volume
Range	11.5%	7.0% or 11,800	$1,646,300
Refrigerator	69.9%	23.2% or 39,000	6,844,500
Radio	103.8%	14.1% or 23,700	1,185,000
Radio-phonograph	.....	9.7% or 16,300	2,037,500
Radio-television	.....	6.3% or 10,600	2,120,000
Vacuum cleaner	67.5%	18.2% or 30,500	1,189,500
Food mixer	35.0%	16.1% or 27,000	668,250
Washer, conventional	65.9%	18.4% or 30,900	2,765,550
Washer, automatic	5.8%	4.5% or 7,500	1,012,500
Ironer	12.2%	11.0% or 18,500	1,850,000
Frozen food cabinet	.....	7.1% or 11,900	2,380,000
Garbage disposal unit	.....	2.4% or 4,000	400,000
Roaster	.....	3.1% or 5,200	130,000
Dishwasher sink	.2%	2.7% or 4,500	900,000

Exclusive New BENDIX Visual Training SERVICE SCHOOL FOR DEALERS



Every phase of servicing taught thru films, slides, visual demonstration, work on actual units . . .

COMPREHENSIVE ARMY TECHNIQUE will train all service managers and supervisors



Right now, throughout the country, BENDIX Automatic Home Laundry distributors are meeting with factory service heads in schools for distributor service managers and supervisors.

As in the case of our retail salesmen's course, the principles and practices used so successfully by the armed forces are employed fully in this comprehensive school. Charts, films and work on a live product are combined to make the course understandable to new men in the appliance field.

All Bendix dealers will soon be notified by their distributors of the extension of this course to the Service Managers of all Bendix Automatic Home Laundry retail outlets throughout the country.

SUBJECTS: General service, home repairs, washing in a Bendix (actual demonstration), product changes, parts improvements, installation, shop repairs, parts stock, presentation of postwar policies, general discussions, individual meetings.

A Postwar Future For Returning Veterans . . .

An excellent opportunity for a career with a future may be yours in the Bendix Service organization. Contact your local Bendix distributor or dealer (under "Washing Machines" in your telephone book) or write direct to the Bendix factory.

BENDIX automatic Home Laundry

Bendix Home Appliances, Inc., South Bend, Indiana • Pioneers and Perfectors of the Automatic "Washer."

Are you fighting HIDDEN REFRIGERANT LEAKAGE?

Spot it immediately with **VISOLEAK**

Detects even the smallest leaks before they cause serious damage to expensive installations and loss of costly products. Years of use have proven *VISOLEAK* to be dependable, economical, safe and easy to use. See your refrigeration supply jobber or write for complete information.

WESTERN THERMAL EQUIPMENT CO.
5141 Angeles Vista Los Angeles 43 Calif.

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

from all parts of the nation have very much the same opinions on economic, political, and business subjects. He deduces this interesting fact from study of a survey made by the deans of 52 state university schools of business.

Small business wants:

1. Income tax laws changed to remove double taxation of corporation dividends and to allow building up reserves, and an even break by the same taxation of co-operatives as of private business.

2. Technical information from the government, but otherwise a "leave alone" policy to work out their own problems.

3. A labor policy allowing rewards to competent and industrious employes; reduction as quickly as possible of government reports and orders; and general freedom for business to compete and grow.

These voluntary opinions were gathered by the National Conference of State University Schools of Business through personal letters. They were analyzed at the University of Illinois and were summarized by the national conference president, Prof. H. T. Scovill, acting dean, University of Illinois College of Commerce and Business Administration. (Many men in the refrigeration industry have taken courses under "Hy" Scovill.)

The double taxation of corporate dividends is recognized as one of the most critical unfairnesses of federal income taxation. Immediate abolishment of the double taxation is almost unanimously recommended.

There is a widespread feeling also that the tax structure should lend more encouragement to the creation of reserves by business concerns.

Decentralization of industry is mentioned as one of the economic changes needed after the war to preserve free enterprise.

Th labor problem is recognized as one of the most important now before business, and also as one of the most trying. Many businessmen commented on the pro-labor attitude of some of the governmental agencies as their princpal grievance or irritation.

Other grievances noted in this survey included the numerous reports required by the federal government, the autocratic actions of federal bureaus, the numerous changes in orders and directives of such bureaus, and the general attitude of government toward businessmen.

(They did not overlook in their criticisms, either, the tendency of bureaus to perpetuate themselves even beyond the date when their services might end.)

Straight from the Shoulder

Dean Scovill quotes some pointed statements from the 10,000 letters. Here are some choice ones:

"Unless there is a provision promptly made by which small businesses are allowed to set up a reserve before taxes, there will be a tremendous number of businesses in serious financial distress, others will fold up completely."

"When we make a profit we must pay a large portion for income tax. We cannot set aside much for future expansion or to tide us over a depression. At the same time our big co-operative competitors are keeping most of their earnings in their business, tax free, for further expansion or to strengthen their financial position."

"Present income taxes penalize the stockholder of a corporation by taxing his income two times—one as the income from the corporation reported in the corporation's tax return, and also as dividends received by the stockholder."

"Small corporations should be given the privilege of electing to be taxed as a partnership or as a corporation."

"The service most needed by small business is technical information and data relating to new materials, new methods, and improved tool and die practice calculated to reduce costs. New production recommendations and foreign market studies are also helpful."

"The less business depends on government the better. It is not wise to give aid or subsidies to business, either large or small, for government dictation would naturally follow government aid."

"Society, speaking through the laws, long ago said that you can't practice medicine unless you know how. By regulation and taxation of business it now says you can't be a small businessman unless you know how. This represents a vast change. If the small businessman is a desirable citizen, then the universities should train him. The universities might well take the lead, too, in adult education of this kind."

"Most businessmen are upset by the lack of long-term planning by our government. The rules of the game have been changed so often that it is difficult for an individual to determine what return he may expect from his investment over a period of time. Basic principles should be understood so that businessmen can plan for a period of not less than five years."

"Discontinue the vast majority of complex questionnaires and co-ordinate the remaining necessary ones so that business has some idea of what it is all about. Place them on a constructive basis. The majority of businessmen want to co-operate with the federal government, but complicated regulations and directives leave them confused."

"I am concerned with labor legislation that forces me to employ an individual with little skill or ambition at the same compensation as an individual that is industrious and high skilled. I am concerned with legislation that does not allow me to award advantages to the ambitious over the less ambitious, simply because it just happened that the less ambitious was on the job first."

"About 75% of employes in small business have been led to believe the last man they should trust is the one who signs their paycheck.

"There is no inducement to employ men when the feeling of trust is lost. This lack of friendliness is why I plan to quit."

Hansen's Here

Frank Hansen, Australian refrigeration tycoon, lights a cigarette for Joe Oberc, Detroit wholesaler.

NOTICE!

IMMEDIATE DELIVERY AT NEW LOW PRICES

JOBBERS and DEALERS!

Handle the money-making AMCOIL line in your area. Write today for details of our attractive line of cooling units—a few localities are still open to qualified jobbers.

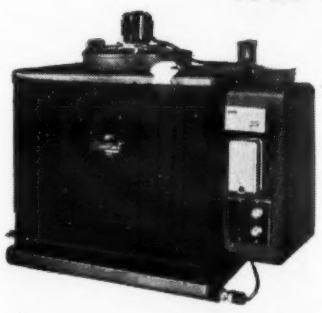
A RARE COMBINATION
The highest quality at Lowest prices

Improved manufacturing methods and automatic machinery have enabled us to reduce prices on all Amcoil units.

Prices effective as of April 1, 1945 and supersede all previous lists. They are subject to change without notice.

COMPARE OUR QUALITY—DESIGN—NEW INVENTIONS—*IMMEDIATE DELIVERY*

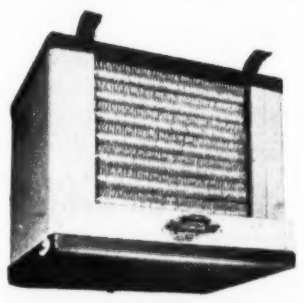
FOOD CONDITIONER COOLING UNIT



Automatically preserves foods without dehydration. Temperatures from 36° to 40° F. For reach-in and walk-in coolers.

MODEL	BTU/HR 15° MTD	LIST PRICE
RIF 38	4,600	$270.00
RIF 43	5,500	283.00
OCF 56	6,500	290.00
OCF 82	9,200	325.00
OCF 126	13,000	550.00
OCF 166	19,500	590.00
FC 50	7,500	333.00
FC 80	11,300	378.00
FC 130	17,000	601.00
FC 160	22,600	641.00

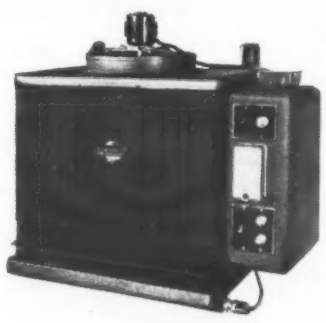
ALSERVICE OPEN FACE UNIT



For efficient cooling and serves as a general utility unit in preserving foods where a forced draft cooling unit is required. Streamlined, in attractive grey and black colors, it produces temperatures down to 36° F.

MODEL	BTU/HR 15° MTD	LIST PRICE
OC 44	4,000	$120.00
OC 48	5,100	148.00
OC 58	7,500	161.00
OC 84	11,000	210.00
OC 128	15,500	322.00
OC 168	23,000	370.00

ZERO-BREEZE LOW TEMP UNIT



A low temperature unit equipped with automatic electric defrost . . . wall-mounted model . . . produces temperatures from +20° F. to −20° F. . . . defrosts automatically on each off-cycle of condensing unit.

MODEL	BTU/HR 10° MTD	LIST PRICE
RZB 60	3,900	$325.00
ZB 120	7,250	425.00
ZB 150	11,000	615.00
ZB 180	14,500	655.00

ALSERVICE REACH-IN PANEL UNIT

A compact cooling unit for all utility refrigeration applications. Designed to meet a growing demand for medium capacity units to balance condensing units of ¼, ⅓, ½ or ¾ HP. Especially adapted for reach-in and small walk-in boxes.

MODEL	BTU/HR 15° MTD	LIST PRICE
RI 15	2,000	$ 94.00
RI 25	2,250	99.00
RI 30	3,000	114.00
RI 40	5,250	149.00
RI 45	6,150	169.00

ALSERVICE DOWN-DRAFT UNIT

An efficient, down-draft cooling unit employing new ideas in refrigeration. . . . May be converted to controlled humidity Food Conditioner by adding the control assembly package.

MODEL	BTU/HR 15° MTD	LIST PRICE
UC 63	8,000	$211.00
UC 100	12,500	261.00
UC 123	17,500	477.00
UC 200	24,000	517.00

Bigger Profits for you and Greater Profits for the user with the Amcoil Food Conditioner. Now available in three different models.

LICENSED UNDER Latent Color Patents Patent Pending

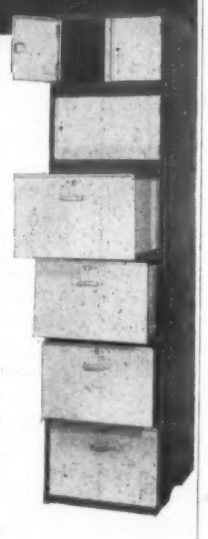
MANUFACTURER'S REPRESENTATIVES

John J. Madden, 212 Madison St., Dedham, Mass.
J. E. Oliphant & Co., 505 Uhler Bldg., Marion, Ohio
Richard Barthelmess Sales Co., 1711 Challen Ave., Jacksonville, Fla.
F. M. Eversden & Associates, 220 So. 16th St., Philadelphia 2, Pa.
Jordy Engineering Co., Inc., 813 Howard Ave., New Orleans 13, La.
P. J. Burrill, 800 North Clark St., Chicago, Ill.
Robbins-Greenwood Co., 3104 Main St., Houston 4, Texas
The Mac Silver Co., 114 No. Sweetzer Ave., Los Angeles 36, Calif.
William D. Keefe, Chaffee, N. Y.

AMCOIL
AMERICAN COILS CO.
25-27 LEXINGTON STREET - NEWARK, N. J.
Cable Address—AMCOIL

KEEP THIS ILLUSTRATED PRICE LIST

ASE FROZ-N-FOOD LOCKERS



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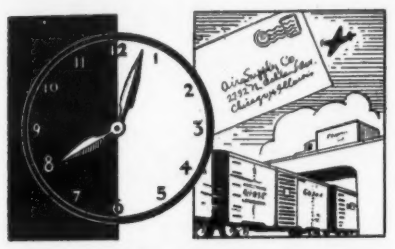
Get into the Frozen Food locker plant business today. Many businessmen find few changes are necessary.

You'll want frozen food lockers . . . A-S-E Froz-n-Food Lockers. Compare their features . . . steel frame and body, glide-easy drawers, rich 2-tone finishes, and many others!

Features that assure you more profit, more satisfaction for your patrons. Write today for full details.

ALL-STEEL-EQUIP COMPANY, INC.
450 GRIFFITH AVE. AURORA, ILL.



AROUND THE CLOCK SERVICE **While you sleep —while you are out on profitable service calls—while you take care of other important business matters—tools, equipment, and parts ordered from AIRO speed on their way to you. No valuable time wasted waiting for counter service when you buy by mail from AIRO, the middle west jobber geared up to give nationwide service "around the clock."**

AIRO SUPPLY CO. (NOT INC.)
Dept. B WHOLESALE ONLY
2732 N. Ashland Avenue
Chicago 14, Illinois

'Green Dragon' Line to Include Machines, Coils

PHILADELPHIA — With completion of an Army Ordnance contract under which more than 250,000 huge fragmentation bombs were produced, Electric Power Equipment Corp. has started reconversion of its South Philadelphia plant. The change-over to commercial refrigeration equipment will be made as rapidly as other War contracts are concluded.

The engineering departments, laboratories, and sales departments have already been installed in the new plant, and much peace-time production machinery has been set up. Reconversion is under the direction of Karl Kummerlen, formerly of the Liquid Carbonic Corp.

Marion E. ("Dusty") Miller, president of the company, has announced that the company will produce complete lines of condensing units, and unit coolers, and also expansion valves. It will be known as the "Green Dragon" line. A new Green Dragon trade-mark is registered.

Opens St. Louis Office

J. D. MERKLE

* * *

Merkle Heads Ranco's New Midwest Office

ST. LOUIS—J. D. Merkle, former assistant sales manager at Ranco, Inc., has been named to head an office here which will serve the Midwest area for the company.

The new office is located in Room 306 South Side National Bank Building, 3606 Gravios Ave., St. Louis.

Mr. Merkle is well known to the refrigeration trade, having been connected with Ranco for the past 17 years.

Palmer Secretary of Soda Fountain Group

CHICAGO—The newly organized Soda Fountain Manufacturers Association has announced the appointment of Carl J. Palmer as executive secretary and the mapping of a five-point program to promote better manufacture, sales, and maintenance of soda fountains.

Mr. Palmer is a veteran of the fountain industry, having held executive positions with Liquid Carbonic Corp. and Bastian-Blessing Co.

Membership is open to all fountain manufacturers, announces the association, which has prepared the following program:

1. Compile and disseminate statistics about the fountain and allied fields.
2. Promote sales and use of soda fountains in wider and better markets.
3. Improve standards of manufacture.
4. Collect and disseminate information regarding health, sanitation, and other requirements or restrictions of federal, state, or local governments affecting manufacture, installation, or operation of fountains.
5. Help fountain operators improve the care and operation of their equipment and assist in the conduct of the retail soda fountain business.

Evans Directs Sales of G-E Product Service

BRIDGEPORT, Conn. — R. D. Evans, formerly district service supervisor of the Atlantic district, with headquarters in Philadelphia, has been appointed sales manager of the product service division of General Electric's appliance and merchandise department, it has been announced by J. H. Miller, manager of the division. Mr. Evans will be located in Bridgeport.

The appointment of T. J. Killeen to be manager of warehousing and distribution in the same division also has been announced. Mr. Killeen was formerly assistant manager of the appliance product service section.

Also in the product service division, W. C. Noll has been appointed manager of the technical and educational sections. He was formerly manager of the product service section.

Universal Cooler Names Clyne Works Manager

CLARENCE T. CLYNE

* * *

MARION, Ohio—Clarence T. Clyne has been named factory works manager for Universal Cooler Corp. here, to succeed A. E. Knapp, who is forced to give up his responsibilities because of illness, announces F. S. NcNeal, president.

Mr. Clyne comes to Universal Cooler from Crosley Corp., and was previously associated with Bell & Howell Co., Teletype Corp., and Alemite Corp.

Mr. Knapp, works manager for the past two years, will continue as consultant for three months to aid in getting Universal Cooler's postwar manufacturing program under way.

Glendale, Calif., Cabinet Company Is Expanding

GLENDALE, Calif. — A factory building, to be known as Unit B, is being erected on Commercial St. here, for the Modern Refrigerator Works. The brick structure will be 55 by 158 feet in area and will cost $25,000.

Meanwhile, the architect is completing plans, and work will begin soon on a second structure for the company, a factory and office building of brick, 110 by 145 feet in area, and this will cost $50,000.

Investigate

SHERER

. . . decide Now on your source for

Refrigerator **EQUIPMENT**

WRITE
SHERER-GILLETT CO.
MARSHALL, MICHIGAN

Mr. Dealer . . . Mr. Service Engineer!

. . . have you ever stopped to think how *You* profit by dealing with your nearest Sporlan Jobber?

1st . . . he has the merchandise you need in stock at all times . . . a ready source of supply.

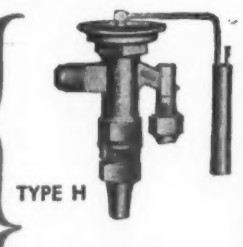
2nd . . . he can give you valuable engineering advice . . . he has the manufacturer's scientific data at his finger tips.

3rd . . . he can save you valuable time on many a job because his stock is local.

And, best of all, you know that Sporlan products have always been available through the jobber and always will be . . . not here today, and gone tomorrow.

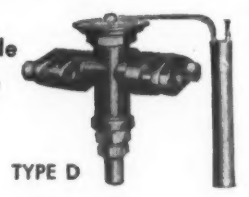
DROP IN ON HIM TODAY and check over these Sporlan products with him. You'll find the time spent mutually profitable!

SPORLAN *manufactures the only* **THERMOSTATIC EXPANSION VALVES** *with Selective Charges*



TYPE H

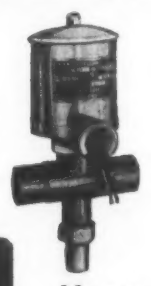
Up to 50 tons Freon 12
Up to 100 tons Methyl Chloride
Up to 10 tons Sulfur Dioxide
Up to 100 tons Ammonia
Up to 20 tons Freon 22



TYPE D

SPORLAN *Peak Performance Liquid Line Solenoid Valves*

QUIET IN OPERATION TIGHT CLOSING RUGGED



Up to 20 tons Freon
Up to 40 tons Methyl Chloride
Up to 6 tons Sulfur Dioxide
Up to 40 tons Ammonia

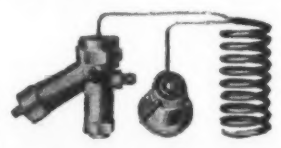
SPORLAN *Solenoid Pilot Controls used in place of large capacity Liquid Line Solenoid Valves*

More economical in initial, installation and operating costs than a large liquid line Solenoid Valve on loads of more than 10 tons Freon 12 and 20 tons Methyl Chloride.

SPORLAN REFRIGERANT DISTRIBUTORS

The Sporlan Refrigerant Distributor is an efficient device for multi-circuit evaporators. It evenly distributes liquid refrigerant to any number of circuits from 2 to 24.

SPORLAN MODULATING PILOT CONTROLS . . . A self actuated temperature control device used in conjunction with Thermostatic Expansion Valves.



SPORLAN TF VALVES

For Peak Performance on all installations . . . always specify **SPORLAN**

SPORLAN VALVE COMPANY
3723 COMMONWEALTH AVE. ST. LOUIS 17, MISSOURI

REFRIGERATION'S BIGGEST PROBLEM!

DRYING POWER OF VARIOUS MATERIALS

Drier	Refrigerant	Liquid or Vapor	Max. % Residual Moisture (Initial water concentration) .25%	.02%
ACTIVATED ALUMINA	Sulfur Dioxide	L	.15	.005
		V	.01	
	Methyl Chloride	L	.02	.006
		V	.01	
SILICA GEL	Sulfur Dioxide	L	.15	.006
		V	.01	
	Methyl Chloride	L	.01	.004
		V	.01	
DRIERITE (Calcium Sulphate)	Sulfur Dioxide	L	.15	.009
		V	.08	
	Methyl Chloride	L	.03	.003
		V	.04	
CALCIUM CHLORIDE $CaCl_2$	Sulfur Dioxide	L	.09	.013
		V	.03	
	Methyl Chloride	L	.10	.003
		V	.04	
CALCIUM OXIDE CaO	Sulfur Dioxide	L	.20	—
		V	.15	—
	Methyl Chloride	L	.15	—
		V	.08	—
BARIUM OXIDE BaO	Sulfur Dioxide	L	.20	.017
		V	.15	
	Methyl Chloride	L	.05	.006
		V	.05	

IMPORTANT QUESTIONS IN SELECTING A DRIER

1. Does the material dry the refrigerant below the corrosion limits when placed in the liquid line? In the suction (vapor) line?
2. Does the material dry the refrigerant below the limits for ice formation with methyl chloride?
3. Does the material accomplish the drying in one passage of the refrigerant, or is it slow, i.e., requires several passages?
4. Does the material deteriorate in physical character in handling or when it removes water from the refrigerant?
5. Does the oil affect the drier adversely?
6. Does the drier corrode?

SEND FOR THIS BOOK TODAY!

Here are practical answers to the most common refrigerant questions refrigeration men ask. This 8½" x 11" book makes a handy reference you will use often. It is complete and authoritative.

Send for free copy of "Ansul Refrigerants" (3rd Edition)—NOW.

LIQUID Sulfur Dioxide by ANSUL*

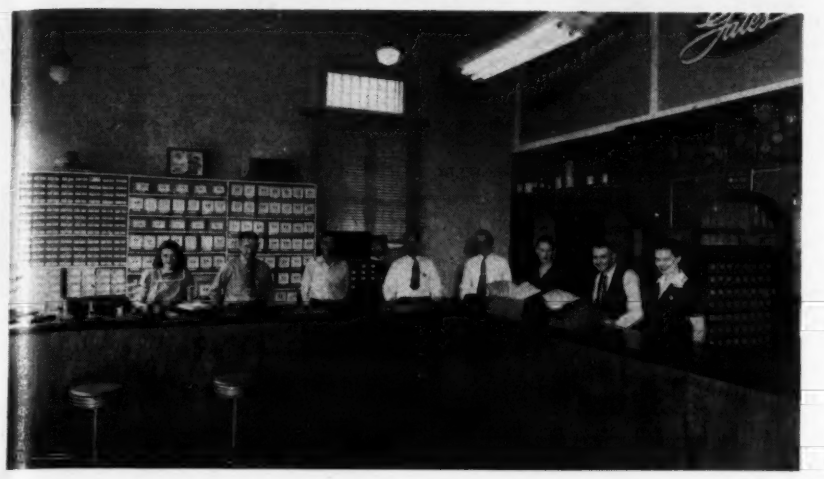
LIQUID Methyl Chloride by ANSUL*

*REG. U.S. PAT. OFF.

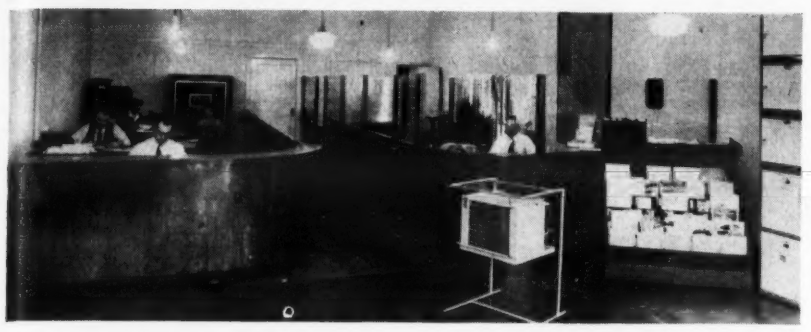
FOR REFRIGERANTS—SEE YOUR ANSUL JOBBER

ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN
AGENTS FOR KINETIC'S "FREON-11," "FREON-12" AND "FREON-22"

Jobber Is Ready for the Postwar Push



Personnel operating the enlarged and remodeled Denver store of McCombs Refrigeration Supply Co. includes (left to right) Lee Martin, W. M. Bowman, Frank Walters, H. R. McCombs, R. C. Kimmel, LeRoy McCutchan; J. A. Marshall, and Helen Gieseler. Note the stools for customers and the paneled counter and back display.



At the other end of the counter at McComb's Denver store are display floor and offices. At the right is a display rack for manufacturers' literature.

* * *

McCombs Enlarges Denver Store, Adds New Branch

DENVER—The McCombs Refrigeration Supply Co. has recently announced the completion of an expansion program which included remodeling and enlarging of the main offices here, and the opening of a new branch store in Pueblo, Col., which is managed by Don Wallace.

The main store now includes two floors and a full basement at 1524 15th St., giving the company a working area of approximately 50 x 100 feet on each floor, said H. R. McCombs, president.

Offices, counter display, and stock bins occupy half of the first floor, with the remainder given over to shipping room and storage. The entire second floor has been remodeled to provide further storage space.

Office manager and purchasing agent for the company is R. C. Kimmel, and the counter salesman is W. M. Bowman. LeRoy McCutcheon is receiving clerk and stockman, shipping clerk is Frank Walters, and J. A. Marshall is bookkeeper.

Appointment of W. T. Farrow to represent the company in the state of New Mexico was also announced.

Blazer Expands Offices, Installs Conditioning

PASSAIC, N. J.—M. Blazer & Son, supply jobbers for refrigeration, ventilation, and air conditioning parts and equipment, have announced the enlarging of their facilities as the first phase of the company's postwar expansion program.

According to B. V. Blazer, the office area, as well as the sales counter and shipping area has been amplified, and a year around air conditioning system has been installed. The company plans to double its physical capacity through the construction of a new warehouse.

It was also announced that the company has just issued for distribution to the trade a new catalog.

Dayton Jobber Stocks Washer Parts to Fill In Slack Seasons

DAYTON, Ohio—By stocking repair parts for washers, Allied Parts Co. here hopes to round out its business of refrigeration parts jobbing, which, like service operations, is fairly seasonal, declared J. L. Homan, who with J. W. Vandergrift, operates this store and a branch recently opened in Lima, Ohio.

"We usually lose money during December with our refrigeration parts business, and have been trying for some time to add some other lines that would make every month a profitable one," explained Mr. Homan. "At one time we tried automobile batteries, but this wasn't successful, chiefly because it represented too much of a departure from the refrigeration field.

"Washer repair parts do tie in nicely with refrigeration, but they are more difficult for us to handle," he added. "About 25 times as many different parts are required for a good stock of washer parts as for refrigeration. Also, there is perhaps less profit.

"For example, we may spend half an hour with a washer repairman and in that time sell him possibly $15 worth of parts," continued Mr. Homan. "But if a refrigeration repairman took 30 minutes to place his order the sale might total $200."

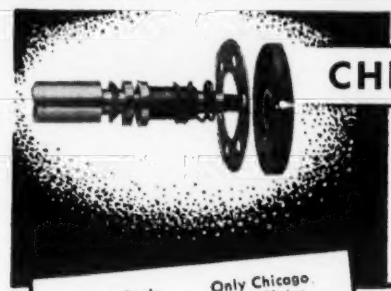
The parts shortage in refrigeration is easing up somewhat, according to Mr. Homan, who stated that the firm is now receiving about 60% more parts than last year.

"In fact we figure on having to expand our business greatly in another year as business expands," he declared.

The firm is doing a big mail order business covering the western half of Ohio, and parts of Michigan, Indiana, and Kentucky. One outside salesman operates out of the new Lima, Ohio, branch, which is managed by Vern Kautt, while Mr. Vandergrift, co-owner, works out of Dayton.

"Both our mail order and over-the-counter business improved greatly when we published our first catalog some five years ago," stated Mr. Homan, "but we still haven't definitely decided just what form catalogs should take.

"This year our catalog was put out in loose-leaf form so that we could add pages and change listings conveniently throughout the year. Now we plan not to issue a new catalog for some time, but to continue sending out new and revised pages."



CHICAGO SHAFT SEALS

Acknowledged as the industry's most effective seal for replacement (even on scored or bent shafts) because it has the self-adjusting sleevelock. Quickly installed. For REAL SATISFACTION never accept a substitute. At all jobbers.

Chicago Seals are best for Coldspot. • Only Chicago Valve Plates have replaceable valve seats.

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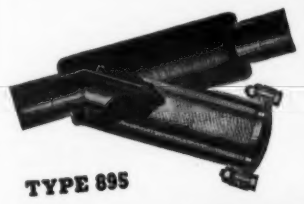

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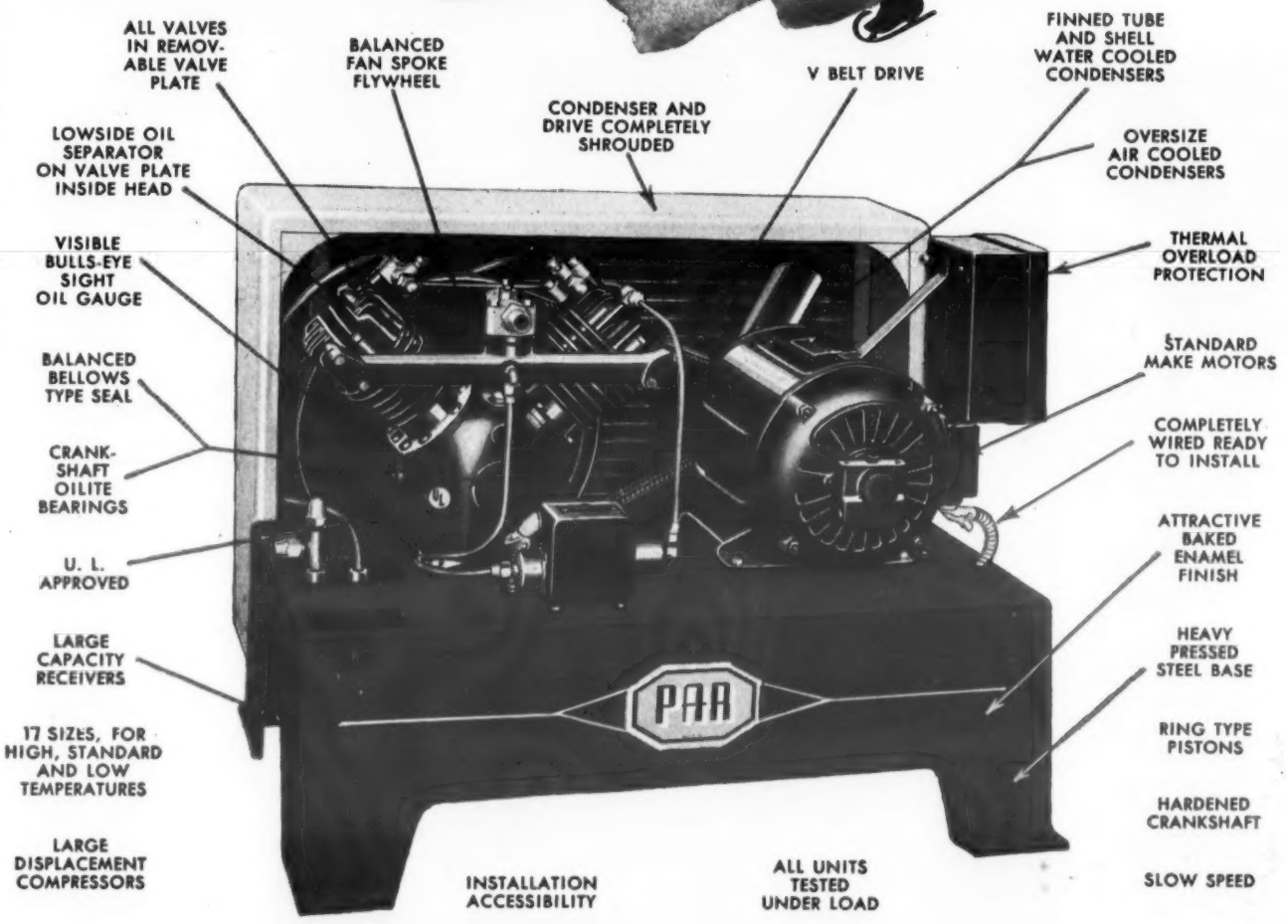
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THE ONLY REASON JERKLEY'S HEAD HASN'T COME OFF IS THAT HE HASN'T GOT ONE...PLUS THE LOAFERPOWER SHORTAGE
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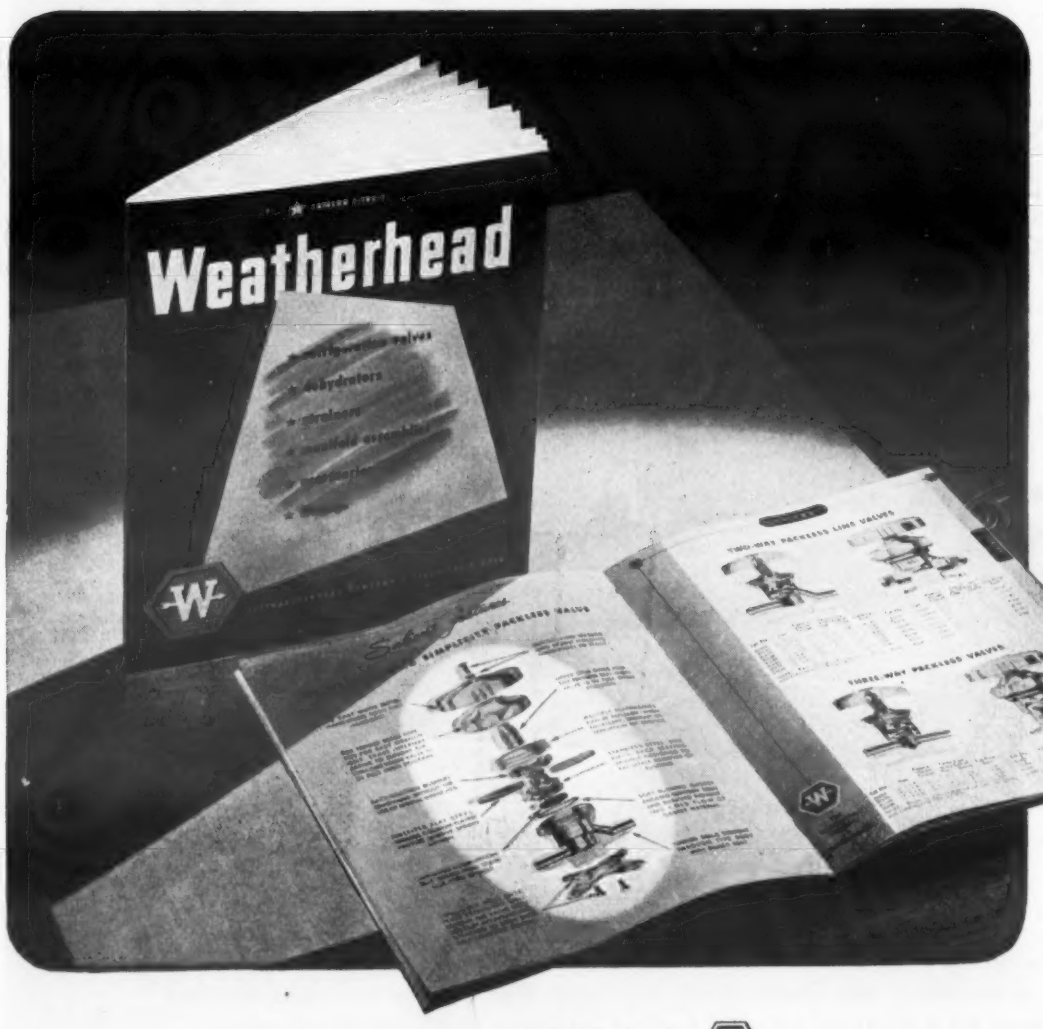

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Published Every Monday by BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit 2, Mich. Telephone Columbia 4242.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $4.00 per year; 2 years for $7.00. All other foreign countries: $6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

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VOLUME 45, NO. 15, SERIAL NO. 856, AUGUST 13, 1945

Let's Talk Sense To the Voters of Tomorrow

NOT so long ago, a large industry discovered by means of a scientific sampling of public opinion that its nationally good reputation was, in one state of the Union, surprisingly sub-standard among younger people in a certain age group, and generally below normal among folks of all ages throughout the state as a whole.

Search for an explanation of this disturbing phenomenon led to textbooks used in recent years in the public schools of that state, which were found to present the industry, quite inaccurately, in a rather disreputable light.

"When a newspaper reports industry inaccurately," said the public relations officer involved in this experience, "no great harm may be done if such errors are not repeated—but when a standard textbook or reference work shows us, even once, in a bad light, the harm done to us just never ceases. People place great trust in books.

"The error becomes the standard belief of a generation of students.

"Industry has largely overcome that unfortunate period of misinterpretation which arose before it made industrial information easily accessible to the press, but it still has before it the equally important job of achieving accurate interpretation at the hands of the writers of books."

By coincidence, just at the time when this problem of securing accurate interpretation in books has been engaging the attention of public relations men, it has also aroused the interest of reputable scholars—several of whom have openly admitted their dissatisfaction with the degree of completeness and accuracy attained by most scholarly recordings of industry's behavior.

Somewhat as a measure of extenuation, however, these scholars point out that their professional standards require them to work with authentic documents, and that there is a scarcity of such material available to witness the constructive side of business achievement (though there is no lack of records of governmental investigations of business, which usually disclose little but its shortcomings and its pathology).

To bridge this mutually injurious chasm between responsible scholarship and useful industry, an informal but widespread movement is now under way to effect a closer liaison between business and our nation's schools—both of whom desire to get the truthful, proveable, and significant facts about business before the public.

Information as to what has been accomplished in this direction, and how the individual business may go about doing its part to make available to reputable authors of scholarly works the actual facts of its accomplishments, may be had by any industrial executive or public relations officer upon inquiry to Stanley Pargellis, Newberry Library, Chicago; Thomas C. Cochran, New York University; Arthur H. Cole, Baker Library, Harvard University; or R. Norris Williams II, Pennsylvania Historical Society, Philadelphia.

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Air Conditioning & Refrigeration News

Users Think Home Freezers Save Money, But Cite Needs For Improvements

What users of home and farm freezers think about them is important for present and would-be manufacturers who look to a big postwar market in this field. In this article, Nancy K. Masterman gives further information on users' problems and suggestions. The first instalment appeared in the July 30 issue of the NEWS.

EXPERIENCES IN FOOD PREPARATION

There was little difficulty in evidence in the cooking of frozen food. A few persons found corn on the cob hard to cook without its becoming water-logged. Others had trouble cooking green beans tender, while others commented upon the fact that it was difficult to cook asparagus so that it was not too soft.

The question of chief interest was whether meat should be thawed before cooking or allowed to thaw in the cooking process. The problem was slight for either method. One home packer of five years' experience with freezing said the flavor was better when the meat was thawed in the cooking process. She felt that rancidity had a chance to develop during thawing.

DOES THE FREEZER RESULT IN SAVINGS?

The idea that money was saved on the food bill was prevalent, though few users had any records to support the idea.

Formerly meat had been eaten to save it, and was now eaten as desired with the elimination of waste. A variety of meats in the diet was made possible by freezing. Money was saved on the feed bill of farm animals since they could be slaughtered at the proper maturity and not carried along with continued expenditure for feed.

Home-grown meats were frozen and stored for family use whereas in the past they had been sold to packers and often bought back as retail cuts over the counter.

Garden surplus was frozen and stored when heretofore it had to be given away.

Full use of fish and game caught for sport was made possible by the home freezer, and game could be enjoyed over the entire legal season.

These circumstances, rather than actual figures, led to the belief that savings were being made.

Home packers estimated that freezing required from one third to one half the time required for canning, with about the same decrease in labor, and with much less fatigue.

The preparation time is about the same for the two processes as for cooking the food when used fresh.

With freezing, however, it is not necessary to get out seldom-used equipment, or to scrub, test, and sterilize containers or jar rubbers. The time spent in watching the canning kettle or pressure cooker and the handling of hot jars is eliminated.

Homemakers appreciate that freezing is done with less heat, less steam, and less confusion in the kitchen than is canning, says Miss Masterman.

No cost records of both processes were available for comparison, but the idea that freezing costs less than does canning predominated. The chief cash saving was in fuel, but it is probable that the electric current used for freezing and storage would cancel this.

Fruits were frozen for jam and for jelly-making later in the season when the farm woman is not so pressed for time.

PACKAGING A MAJOR PROBLEM

Home users have experienced some difficulties in packaging frozen food. This is due partly to a lack of education in how to prepare foods for freezing and partly due to the failure to realize that this process demands special treatment.

Because of lack of information and in the effort to make the business profitable, locker operators have often chosen a wrapping paper for meat simply because it was inexpensive. They fail to realize that packaging affording only a minimum of protection is expensive, regardless of first cost.

Many locker plants fail to make the best use of the materials they have selected, and thus add poor methods to poor material. The result is that the frozen food is not protected from drying out.

One of the most frequently encountered problems in the storage of fruits is that of leakage. Again, lack of experience and guidance has often resulted in a poor choice of a package for freezing fruits with sirup.

On the other hand, some packages recommended by the manufacturer are not adequate. Sirup is heavy and freezes slowly. In many instances the liquid never freezes solidly.

Package liners may burst at the seams, and sealing is often incomplete or weak because of the presence of moisture or the use of too hot a sealing device. Some packages are not liquid-tight when inverted, and they are frequently upset.

Unfortunately, the containers of today that are leakproof and liquid-tight are wasteful of space. They are preferred by many, however, because they can be depended upon to hold the product. The ideal package would be both space-saving and leakproof.

Packaging must protect the food from absorbing odors and from giving off odors, because fish, smoked

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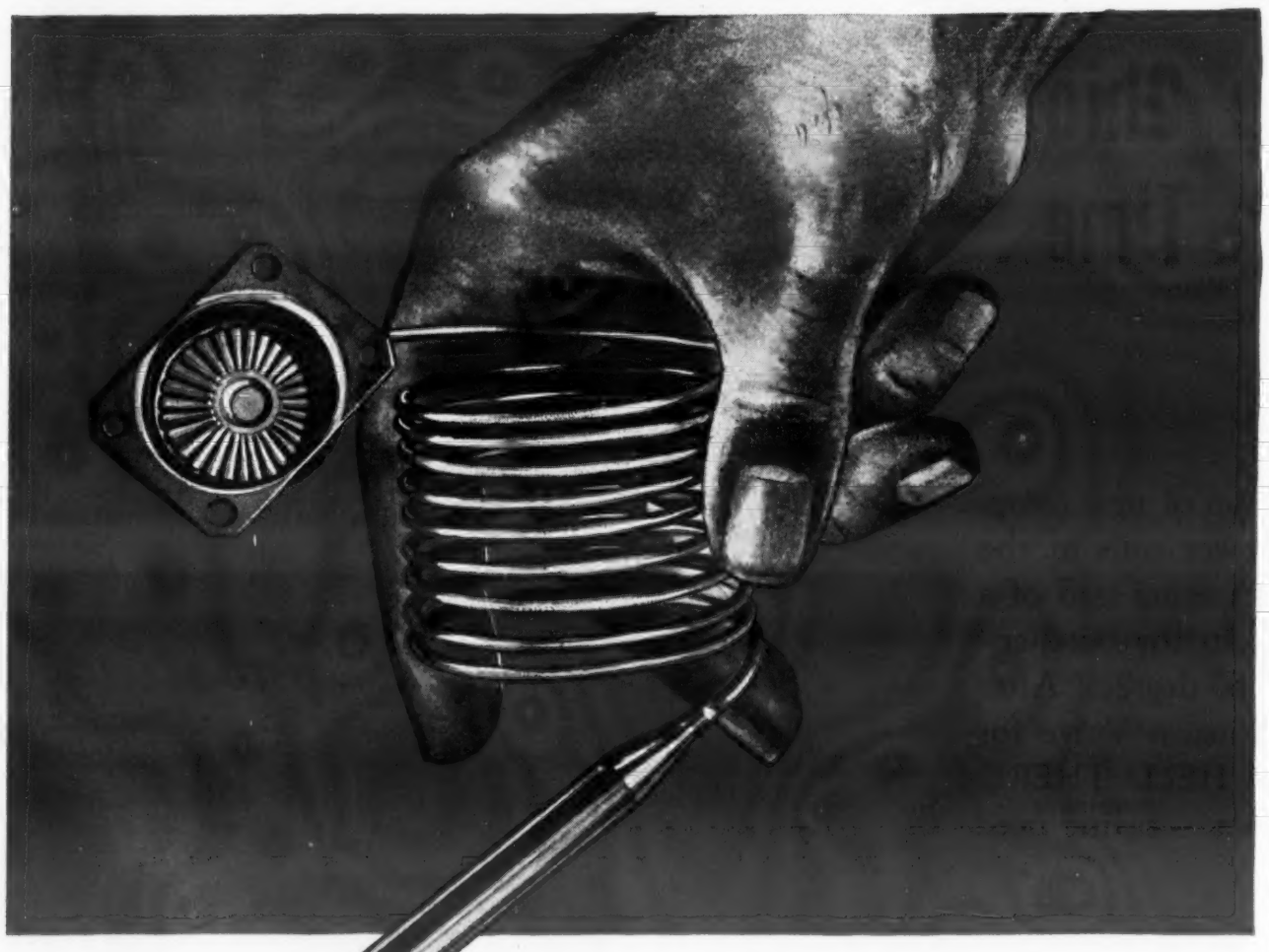

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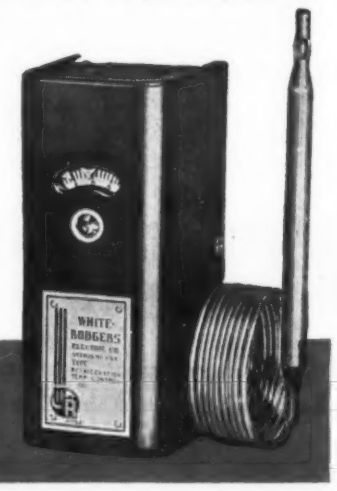

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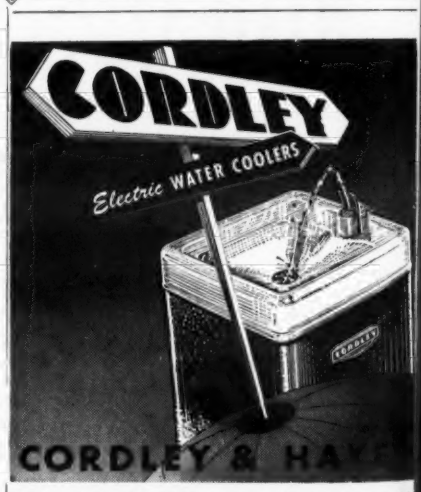

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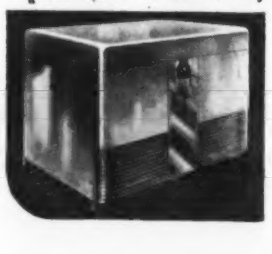

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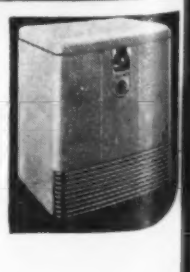

Packaging of Frozen Foods Is A Major Problem, Users Say

(Continued from preceding page)

meats, and other strong-odored products are stored side by side with the delicately flavored products.

Many users of home equipment have found their units invaluable for storing of butter. It is placed in the freezer at the peak of production to carry the family over the period of non-production or of high prices.

Butter has been unsatisfactory in cabinets when the packaging has been inadequate to keep it from absorbing flavors. The cellophane stockinette combination is the best on the market today for meat, the report states.

SUGGESTIONS FOR BETTER PACKAGING

Owners of home freezers are aware of the lack of convenience in packages. "Why do packages for home frozen food open at the end?" they ask.

"Why can't we have side-opening packages such as packers use?" The user that asks these questions has had enough of trying to pack fragile asparagus, broccoli, or non-symmetrical vegetables into an end-opening package.

The end-opening package does not stand up alone, and improvised equipment is needed to hold it for filling speedily and conveniently. Some users have abandoned the use of the end-opening liner package in favor of one of their own invention. They wrap vegetables, such as asparagus and broccoli, in cellophane and protect them with a stockinette as they do meat.

The carton with an unglazed, unparaffined surface that sticks to the freezer plates and the cellophane liner that sticks to the hand, that breaks at the crucial moment, that refuses to seal, are an aggravation that causes one to turn to something else, reports Miss Masterman.

The paraffined cube is convenient and saves space, yet it may leak. The round tub container is easy to fill, easy to close, and easy to empty. It is stable, sturdy, durable, and convenient; on the other hand, it is wasteful of space.

At least twice the number of cubical or rectangular containers than round can be stored in the same space. The flat, rectangular package or cube is preferred by the user who considers the cost of his space and especially by locker patrons who have only 6 cu. ft. of storage space. Freezer bags or envelopes are convenient to fill and seal, but awkward to store, the report states.

A container should be of a size to fit the needs of the family. Meat may easily be cut and wrapped according to the size of the family. Many locker plants cut meat according to the specifications of the patron.

With fruits and vegetables, the problem is more complicated. Packages have not been standardized and are not uniform. Hence there is confusion as to the number of servings to expect from packages.

Standard pint-size and quart-size packages are easy for the homemaker to calculate servings, because she is accustomed to these sizes from her canning experience.

A container should be as easy to empty as it is to fill. Packages that have been difficult to fill may not have been filled to capacity. Time would be saved in filling packages and in keeping them organized in the freezer if larger containers were available for large families, or for use in entertaining.

Some users have considered containers too expensive to throw away after one use. They have therefore used cartons a number of times. This practice is discouraged by authorities on freezing. Packaging for frozen food should not add too much to the cost of the product.

A cost of four or five cents a package seems too much to the home packer of fruits and vegetables. He thinks of glass jars that are used again and again, or of tins that are used three times before they are discarded.

The package with a liner can be used again with a new liner, provided it is of sturdy construction and has not leaked. The heavily paraffined container has been used several seasons by careful users.

Many locker operators and home processors are illogical. They are willing to put a few cents' worth of peas into a five-cent package, yet they object to paying the price for good moisture-vapor-proof wrapping for steak worth $1.50. Protection should not be sacrificed for a false economy, the report warns.

Many of the problems of today have their roots in the war. Users have had little choice in packages, and have had to take anything offered. Retailers have been few, those in business having little variety from which to select.

Numerous excellent packaging materials have not reached the mass of users that have sprung up almost overnight. Supplies are limited, distribution is exceedingly poor, and the consumer is uneducated in the value of various materials and in the knowledge of where to find them.

Many difficulties will vanish when trade and distribution are again normal, it is predicted.

Some of the troubles in using packaging materials would be lessened or eliminated by the use of certain accessories. Some enterprising persons have fashioned a block on which to shape their boxes and to put the liners in place, informs the Cornell report.

A mandrel does away with a number of the difficulties in the use of the bag-in-box type of package. Badly needed is a funnel for filling packages, so designed that it protects the liner from moisture and makes for speed in filling.

Tape that really seals and stays sealed at zero temperature also is needed. Those who use colored tape find it useful in identifying packages in storage and are envied by the large majority who have been unable to obtain it.

Labeling packages has been another problem. One has not known what to use or where to get ink, crayon, or pencils that make their mark on paraffined surfaces or that stand low temperatures.

A sealing device with controlled heat will eliminate the uncertainty of the flatiron or curling iron. Holders for cellophane rolls, stockinette, and locker paper have been made at home by the handy-man.

A few persons set up a processing room where equipment and materials are always ready and conveniently arranged for use, says Miss Masterman.

(Concluded on next page)

. . . . MODERN EFFICIENT ECONOMICAL REFRIGERATION

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TYLER REFRIGERATORS

Better Arrangements for Food Storage Needed in Home Freezers, Users Believe

(Concluded from preceding page)

"Freezing leads to experimentation and to the constant increase of knowledge." The majority of home packers of frozen food reported that they followed the "book" closely. While most products were frozen according to rule, many products for which directions were not given were frozen, and users departed from the rule in other instances.

HOME EXPERIMENTS WITH FREEZING FOODS

Baked goods, such as bread, rolls, biscuits, muffins, cup cakes, cakes, cookies, pies, doughnuts, unbaked pies, and unbaked pastry have been frozen. The experiments were considered successful, and in a number of instances freezing of baked products became a regular practice.

One person reported that the crust was improved when pies with juice, such as apple, cherry, mince, and the like were frozen unbaked, then baked just before use. Pies such as pumpkin and those with a more or less dry filling were just as good when frozen after baking.

It was reported that home-cured ham was tenderized by freezing and superior to the unfrozen product. Freezing and storing bacon at low temperatures was satisfactory for fairly long periods. In some instances it had kept in better condition longer than when stored at home by other methods.

Butter was stored satisfactorily, heavy cream with varied success, and home-made ice cream was considered an excellent product, the report states.

The product known as cream-spread or dairy-spread was changed in texture by freezing. Cottage cheese, both plain and seasoned with chives, saffron, anise, or other seasoning, was considered good.

Cooked foods were stored satisfactorily and were found convenient to have on hand.

Melons were considered satisfactory, but pears lost texture on freezing.

Citrus fruit juices were stored satisfactorily.

One person reported omitting the blanching of the vegetables before freezing but the results were not satisfactory, it is reported.

One person omitted the blanching of corn and considered the product satisfactory but failed to mention the length of storage time.

Some users experimented with different packaging materials, but arrived at the same conclusion—cellophane and stockinette are the most satisfactory wrapping for meat.

Vegetables were packed in home-made cellophane bags with good protection.

This increased ease and speed in packaging. Drying of meat was reported when the meat was wrapped only in locker paper. Two thicknesses of paper seemed to give more protection than did one, the report shows.

SUGGESTIONS FOR IMPROVEMENTS IN HOME FREEZERS

Home freezing cabinets have performed to the general satisfaction of their users. They have maintained a temperature low enough to freeze a satisfactory product and a storage temperature low enough and constant enough to hold the product over a normal storage period.

Chief problem in the use of home freezers has been that of convenience. In most of them it is impossible to find the desired food readily.

In the words of a user, "The chief limitation of freezing is the constant sorting and organizing of foods. Even then things get lost in the box. No matter how methodical the person, or how carefully the packages are put away, they get scrambled so things cannot be found."

Sixty-one per cent of the farm users placed the lack of an organization device among the chief problems in the use of a home freezer; 51% of the village, 47% of the suburban, and 64% of the city users also considered this a major problem.

Most users said, "some way should be found" rather than presenting any definite suggestions. The suggestions offered by some users were: movable partitions to separate food groups; baskets; racks; sliding trays or shelves; revolving trays; drawers.

ORGANIZING THE STORAGE SPACE

Some users made partitions, baskets, or racks in an effort to solve their problem. Other devices such as colored tapes, string, labeling ink, special wraps, and a map on the wall by the freezer, were of some benefit but did not solve the problem entirely.

Part of the difficulty of organization and of locating packages is the depth of the freezer. Many women cannot reach the bottom of the cabinet.

The eternal question when going to the box seems to be, "Am I going to get something out or am I going in myself? There's about an even balance as to which will happen."

One user who fell in, seriously suggested that freezers be equipped with a grab-bar for lifting oneself out in such an emergency.

Many freezers are too wide, both from the standpoint of use and from that of getting the unit into a house or finding a place for it after it is in.

ALARM DEVICE IS DESIRABLE

Users expressed concern over not knowing what was going on in the freezer (what the actual temperature might be) and in not being aware of any failure of the mechanism or other disruption.

Thirty-five per cent of the farm users, 46% of the village users, 60% of the suburban users, and 92% of the city users wanted some kind of alarm device or indication of temperature inside the freezer. A visible thermometer was desired by 32% of all users.

SUGGESTIONS FOR THE 'MACHINERY'

The following improvements in the machinery were suggested: a more quiet compressor; accessible valves, controls, and service parts; more accessible oil cups; and an oil reservoir gauge.

One user said, "I always have the oil job in mind but hate to get at it—it is now a hard job like oiling an old-fashioned automobile." Removable panels around the compressor, a more accessible motor fan, less space for the motor, or a remote installation, are desired.

Other suggestions include: more soldered connections; fewer repairs and adjustments; high and low-pressure gauges; easier defrosting; a solution for the defrosting problem that exists in the side-opening type of unit; holding-plates in the cabinet in case of power interruption; a clock to turn off the freezer; and a device for the easy adjustment of temperature if the thermostat is to be set manually.

Improvements suggested for the freezing compartment were: a separate freezing compartment; the location of the freezer compartment in the center of the unit; a fan in the freezing compartment; a fan that takes little space in the freezing section.

Mechanical changes suggested included: larger openings; tight, well-insulated lids; leakproof doors; hinged lids; hinged lids with gaskets; hinged lids with clamps; weighted lids; handles on lids that are easy to grasp; a net; square compartments instead of round; more compartments; larger compartments.

The materials of which the unit is constructed should be durable, rustproof, and easy to clean.

THE RESPONSE HAS BEEN TERRIFIC . . .

WILSON ZEROSAFE

Wilson ZEROSAFE Farm Freezer Model FF-60 (Cap. 60 cu. ft.) Self-Contained Models: Up to 25 cu. ft. Sectional Models: Up to 100 cu. ft.

1. From 1939 up to the time government limitation became effective, Wilson Reach-In Farm Freezer production was doubled and redoubled to meet rapidly growing demands.
2. All of the experience gained in years of designing and manufacturing Wilson ZEROSAFE is going into the production of this equipment on a huge new production schedule when the "green light goes on."

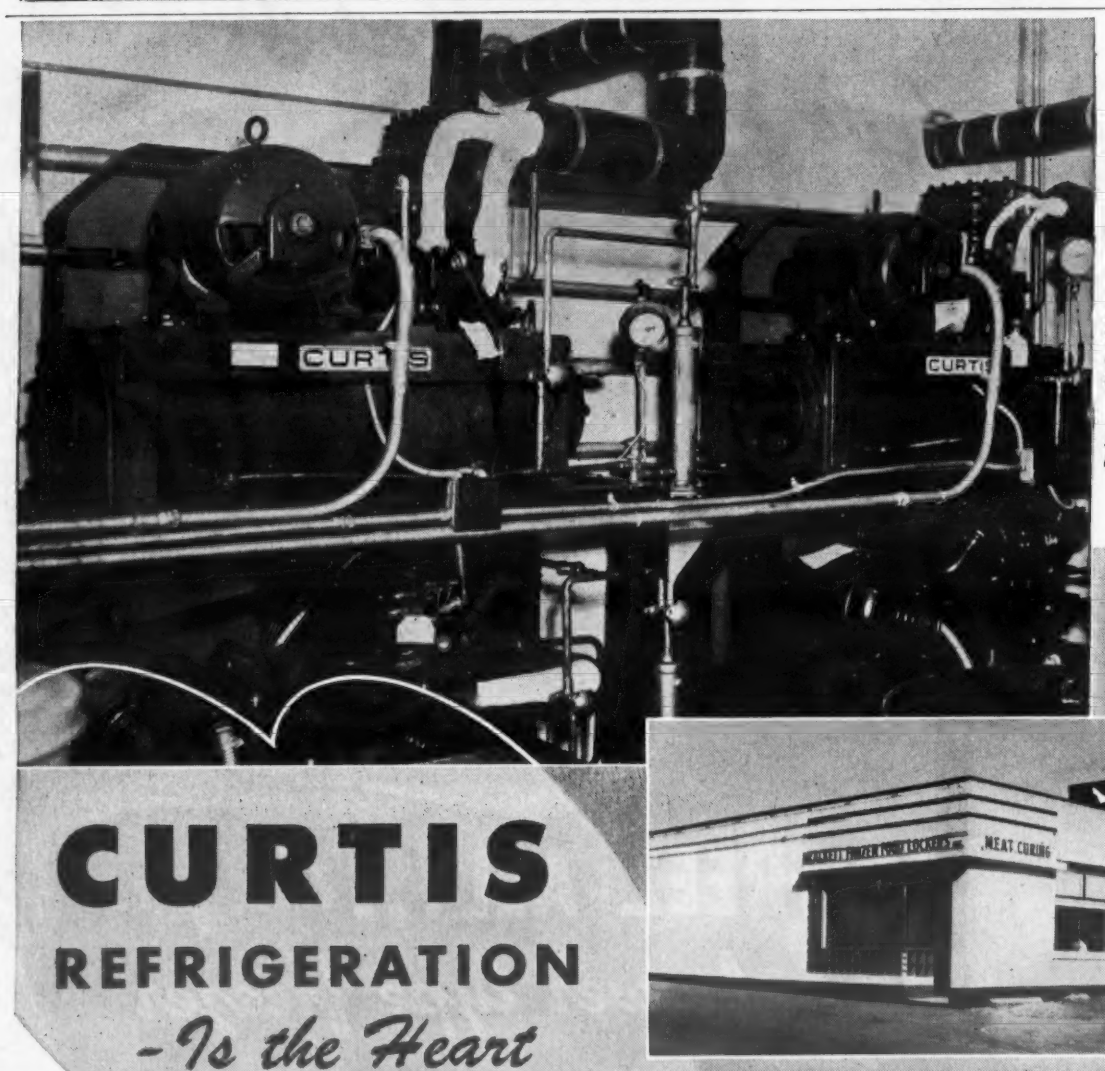
WILSON CABINET COMPANY

COMMERCIAL REFRIGERATION EQUIPMENT

SMYRNA DELAWARE

WILSON ALSO MAKES . . .

ZERO-FLOW and VERTI-COIL Milk Coolers
ZEROVAULT Walk-Ins for Frozen Food Storage
ZEROSAFE Reach-Ins for Storing and Dispensing Frozen Foods
NORMAL TEMPERATURE Walk-Ins & Reach-Ins

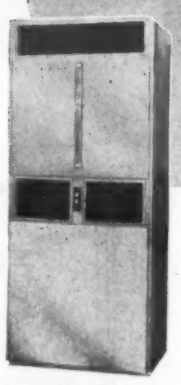


At Left: A part of the Curtis Compressor equipment serving the refrigerating requirements of the plant.

Below: Exterior of locker plant — 830 lockers.

CURTIS REFRIGERATION -Is the Heart of This Efficient LOCKER PLANT

Refrigeration dealers can not only profit by constructing new locker plants, but there is profit to be gained in rebuilding and modernizing plants that are not adequately refrigerated or insulated. In many locker plants throughout the country, CURTIS Refrigerating Units are proving the answer to the demand for dependable, efficient, trouble-free performance throughout an exceptionally long machine life.



3 and 5-ton Packaged-Type Air Conditioner.

Ask about Curtis Air-Conditioning Equipment, too.

WRITE FOR COMPLETE STORY ON THIS UP-TO-DATE CURTIS-EQUIPPED LOCKER PLANT

Bulletin RX-3 will be mailed on request

CURTIS REFRIGERATING MACHINE DIVISION of Curtis Manufacturing Company

1912 Kienlen Avenue • St. Louis 20, Missouri

CURTIS REFRIGERATION AIR CONDITIONING AND COMMERCIAL

B-456

FOR VICTORY BUY MORE WAR BONDS AND STAMPS

SALES ENGINEERS FOR EASTERN SEABOARD

Leading refrigeration and air conditioning equipment jobber manufacturing own line of gravity finned coils and distributing complete line of equipment and supplies requires sales engineers to complete expansion program.

Unusual postwar opportunities with liberal remuneration guaranteed during transitional period.

Replies to be treated strictly confidential should include complete background and experience.

Box 1782

Air Conditioning & Refrigeration News

Off the Chest

VOICE FROM THE PAST

Copenhagen, Denmark

Editor:

Dear friends, after five years of Nazi terror here in Denmark, I am glad I can write a letter to you. Please take me up like a subscriber of the AIR CONDITIONING & REFRIGERATION NEWS. I will be glad to have some interesting numbers of the NEWS from this five years, and a piece of the latest edition of Refrigeration "Directory and Market Data Book." In the five hard years from 1940 to 1945 I have never heard a word about the development in the American Refrigeration Industry.

The money for the payment of the NEWS and the Book will be sent to you as soon as the Danish National Bank frees the money.

HANS G. ROSSING

REPAIRMEN STILL SCARCE IN N.Y.C.

Refrigeration & Air-Conditioning Guild, Inc.
815 Broadway
Brooklyn 6, N. Y.

Editor:

I am again taking issue with R. J. McKenty of Rex Cole, Inc., secretary of the Refrigeration Service Managers Association of Greater New York. You have a statement of his published in your issue of June 25. Once before Mr. McKenty was wrong in stating that there was sufficient manpower in New York City, and about three or four months ago, he himself stated publicly that the manpower shortage was still great; yet on June 25, there appeared a statement from him that there is more than enough manpower. Your article states:

"Ironically, the desperate shortage of repairmen and repair parts felt a year ago have been largely relieved," he said. "As is, the industry is just about able to take care of normal seasonal demands."

He speaks only for about seven service companies, whereas we represent a good deal more than that. Let me assure you officially, that there has never been such a dearth of refrigeration service men as there is this season, particularly in commercial refrigeration. I am not talking about beginners or non-trained refrigeration men.

Of course, you know the Federal Security Agency has discontinued its support of refrigeration service training so that no new men are being trained in schools and only some are being trained in refrigeration service companies, themselves. True, there has been a good deal of relief in the parts situation, but definitely not in the manpower.

In my office we receive calls every single day for experienced refrigeration service men, and, of course, these cannot be furnished. This shortage was felt particularly last week for New York City had a sudden hot spell directly after a long cold spell.

From the above statement, you can see that we definitely do not agree with the opinion of Mr. McKenty and we can prove it. Such a statement made publicly would provide an incorrect pictue of the manpower situation in New York City.

NATHAN EDELSTEIN,
Vice President

A BRIGHTER HOPE

Cincinnati, Ohio

Editor:

I have waited to write you about your book, "Great Day Coming!" until I could find time to read at least part of it, and now that I have had that pleasure, may I congratulate you on one of the most thought provoking and instructive works that I have read in a long while. The industry as a whole will no doubt profit from your observations.

I wonder, if you, like myself, may have found a somewhat brighter hope for those "great days coming" in the fact that we are no longer shackled by one-man government and the endless ills that had grown up around it.

My deep appreciation to you for the greetings on the fly leaf, and for the stimulating manner in which you have dealt with a great industry.

Continued success to you, and should you have occasion to come to Cincinnati at any time, I hope you will give me a call.

H. A. PENDERGRAPH

WANTED

REFRIGERATION PRODUCTION EXPERTS

Leading manufacturer of refrigeration and air conditioning heat exchanger equipment needs several men versatile in handling the engineering, design, and assembly of refrigeration products. Write, giving age, experience, and salary expected. Our employes know of this ad. Box 1752, Air Conditioning & Refrigeration News.

WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION

Lipman
AUTOMATIC REFRIGERATION

WRITE FOR CATALOG

Do to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

Two more in the series of "Freon" advertisements currently appearing in TIME Magazine.

Is there an icepick in the house?

It isn't easy to show a picture of 80° or 50° or even 30° below zero. As a matter of fact we were just about to give up trying when someone said, "Cold enough to freeze an Eskimo." Poor Nanook!

Seriously, though, there are lots of ways these extreme low temperatures can be put to practical use. Industrial [illegible] them. And locker plants will use them to quick-freeze that first trout of April and keep it fresh for Christmas.

Whenever these sub-zero temperatures are required, engineers can depend on "Freon-22" refrigerant for safe and satisfactory service. "Freon-22" will play a big part in a greatly expanded very low temperature field [illegible] Chemicals, Inc., [illegible] reets, Wilming-

[illegible] VITAL TO WAR

[illegible] nts

[illegible] orine refrigerants

He's worried... and it's only 30° below!

Even for this fellow there's such a thing as "too cold." And if he were exposed to some of the stratospheric temperatures men work with every day he'd really have cause to worry. For many of them are cold enough to freeze a polar bear's ears off.

Take aircraft testing laboratories, for example. Some of them have cold rooms where temperatures way down in the minus eighties are used to find out how high airplane engines can fly before the oil freezes . . . before the gaskets crack like glass.

Frozen food processors use temperatures daily that would rival a tough arctic winter. Chemists use them too, and many metal-working industries.

"Freon-22," produced by Kinetic, makes it easier to put these low temperatures to work. And refrigeration engineers know they can depend on "Freon-22" for safe and satisfactory performance. "Freon-22" will have its important place in the future of the very-low-temperature field. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington, Delaware.

FREON safe refrigerants
REG. U. S. PAT. OFF.

KINETIC "Freon" is Kinetic's registered trade mark for its fluorine refrigerants

These Ads in "TIME"

tell the story of "FREON-22" for low-temperature refrigeration

More than 2,200,000 readers of Time Magazine . . . including thousands of business executives, architects, engineers and professional people . . . see these attention-getting advertisements on "Freon-22."

These ads explain the advantages of "Freon-22" for extreme low-temperature refrigeration in commercial and industrial plants. They urge engineers to consider the many benefits of this safe refrigerant for postwar equipment . . . locker plants . . . home quick freezers and other sub-zero refrigeration.

"Freon" advertising ties in closely with that of refrigerating and air conditioning equipment manufacturers . . . and is aimed toward creating a better understanding of the role refrigeration and air conditioning will play now and in postwar years. Kinetic Chemicals, Inc., Tenth & Market Streets, Wilmington 98, Delaware.

IMPORTANT—"Freon" safe refrigerants are again available in quantity for comfort cooling, refrigeration and other applications. Systems converted to wartime substitute refrigerants should now be reconverted to "Freon."

KINETIC
FREON
REG. U. S. PAT. OFF.
safe refrigerants
"FREON" IS KINETIC'S REGISTERED TRADE MARK FOR ITS FLUORINE REFRIGERANTS AND PROPELLENTS

On Time Delivery of Small Parts

WADSWORTH FACILITIES

Die Making
Jigs and Fixtures
Gage Making
Model Building
Milling
Drilling
Turning
Stamping
Screw Machining
Hard Soldering
Heat Treating
Line Assembly
Polishing
Lacquering
Photo Etching
Product Decorating
Silk Screening
Metals Laboratory
Engineering Design
Product Design

WADSWORTH specializes in production of critical small parts and sub-assemblies, difficult or expensive for the average plant because of intricacy or close tolerance. These we are prepared to make in any quantity and to deliver on time. Let us discuss with you your future requirements.

SMALL PARTS DIVISION

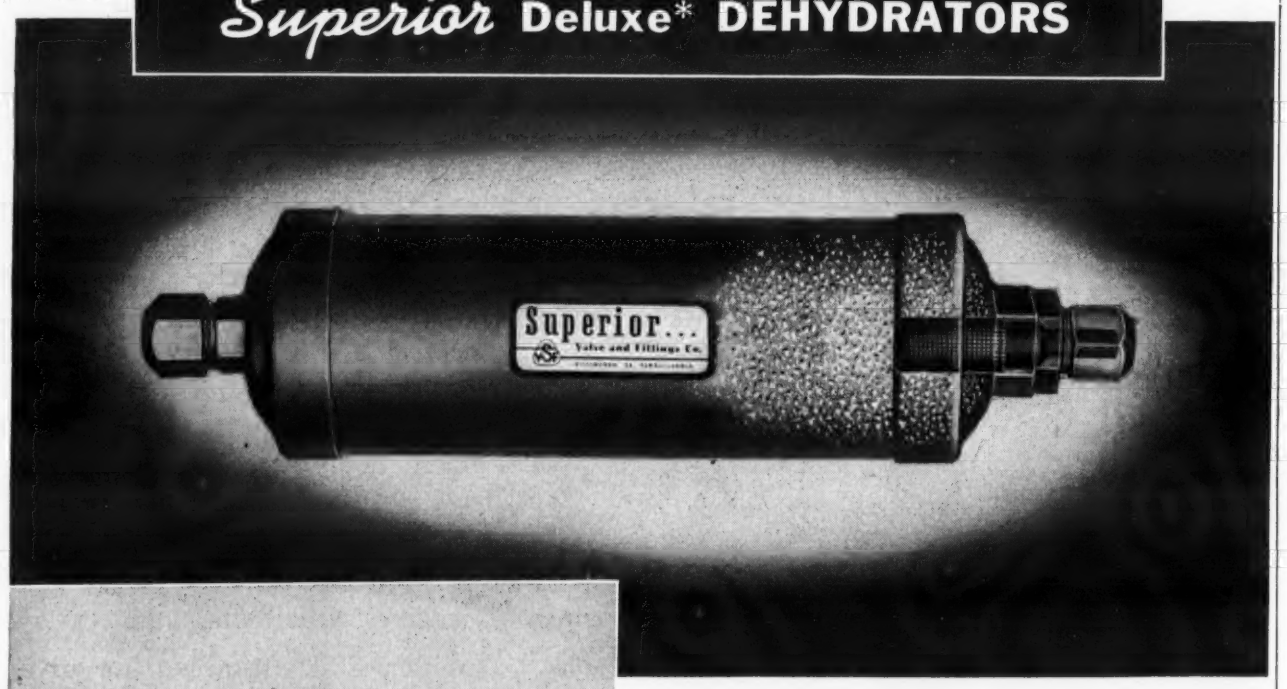
THE Wadsworth WATCH CASE CO., INC.

DAYTON, KENTUCKY, SUBURB OF CINCINNATI, OHIO

TODAY WE ARE SERVING THESE INTERESTS: Aircraft • Automotive • Bearing • Electronics Instruments • Machine Tool • Small Arms • Refrigeration

★ ★ ★ BUY AND KEEP WAR BONDS ★ ★ ★

Superior Deluxe* DEHYDRATORS



. . . readily refillable . . . on the job, or in the shop. When the gasket-type, inlet-end Strainer Union is removed, you get a generous unrestricted dehydrant removing and filling opening.

High quality filter pad . . . fortified by supported screens at outlet-end removes even the finest particles of foreign matter from the refrigerant stream.

End fittings are silver-soldered to end caps . . . end caps are soft-soldered to main body . . . removable for inspection and replacement of filter pad and screens.

Superior FILTERS

Equipped with highly efficient sack-type filter, plus fine screen at outlet-end. End fittings are silver-soldered to end caps . . . end caps are soft-soldered to shell . . . removable for replacement or cleaning filter sack.

If you haven't a copy of Catalog R2, request one today.

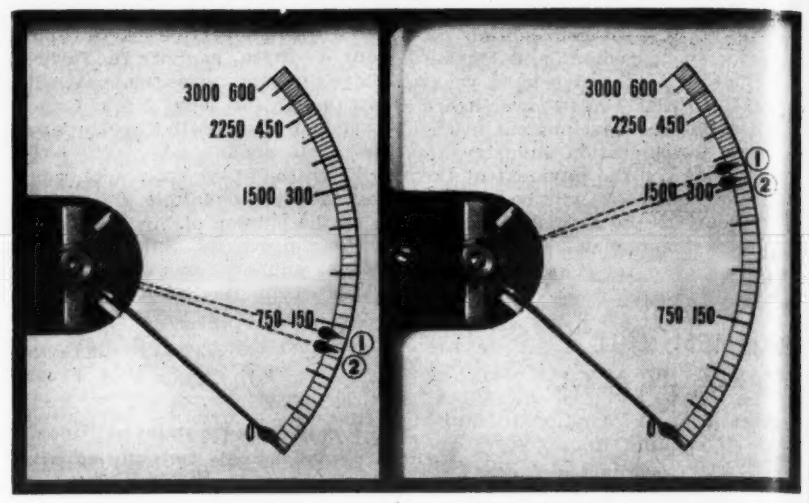
NO. 99

SUPERIOR VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA
OFFICES IN PRINCIPAL CITIES • STOCKS CHICAGO (6) • LOS ANGELES (15) • JOBBERS EVERYWHERE

Servicing Frigidaire Meter-Miser Units

Instalment No. 3

10—Using Watt-Meter to Check Proper Operation of the Relay

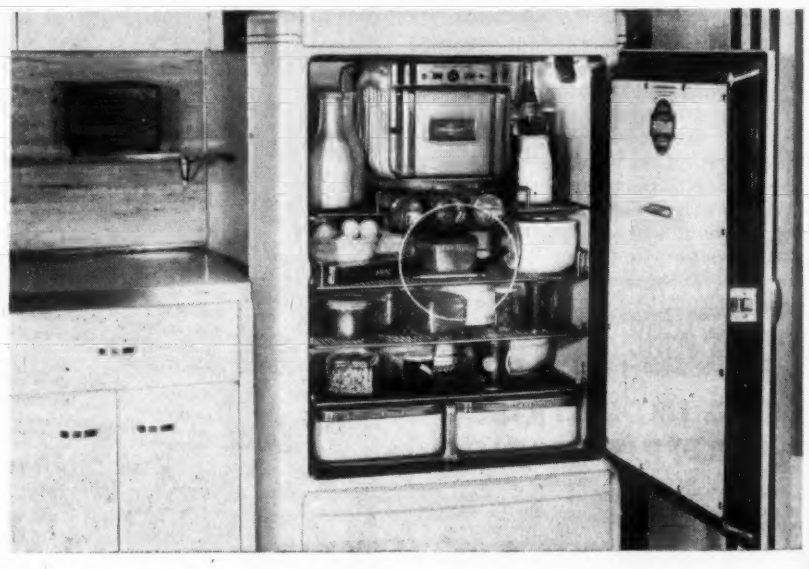


Relay Fails to Cut IN Starting Windings. **Relay Fails to Cut OUT Starting Windings.**

At the LEFT is the action when the relay fails to cut in the starting winding. Position 1 is the overswing. Position 2 is the stalled running winding wattage, which remains constant until overload protector trips and the needle drops to zero.

At the RIGHT is the action when the relay fails to open or cut out the starting windings. Position 1 is the overswing. Position 2 represents the combined starting and running winding wattage, which decreases constantly until the overload protector trips the relay and the needle drops to zero.

11—Some Sealed Rotary Service Problems And How They Can Be Remedied—Cabinet Too Cold



With this condition, we may find an exceptionally heavy coating of frost on the freezer. Or, if the freezer has been defosted recently, a check with the dial or pocket thermometer will show that the food compartment is too cold.

Swan

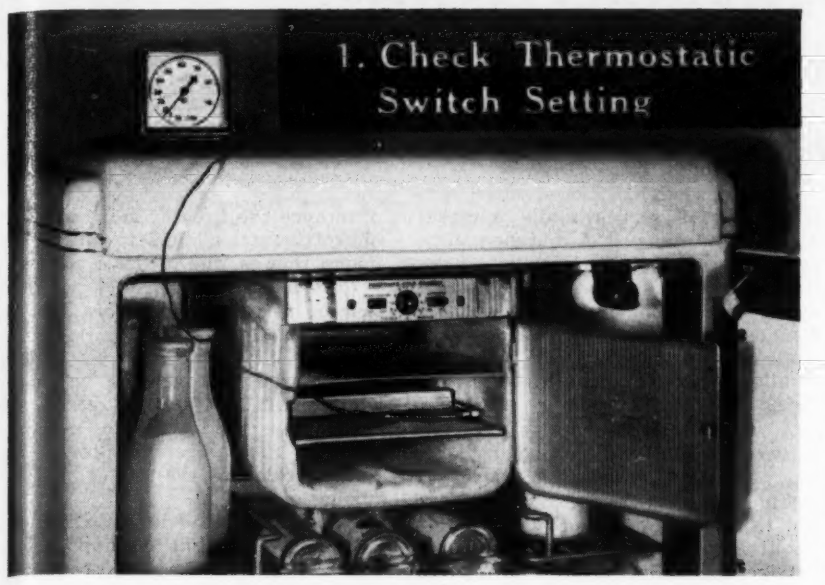
We have built, are building, and shall continue to build all types of custom-made coils for air conditioning and refrigeration equipment.

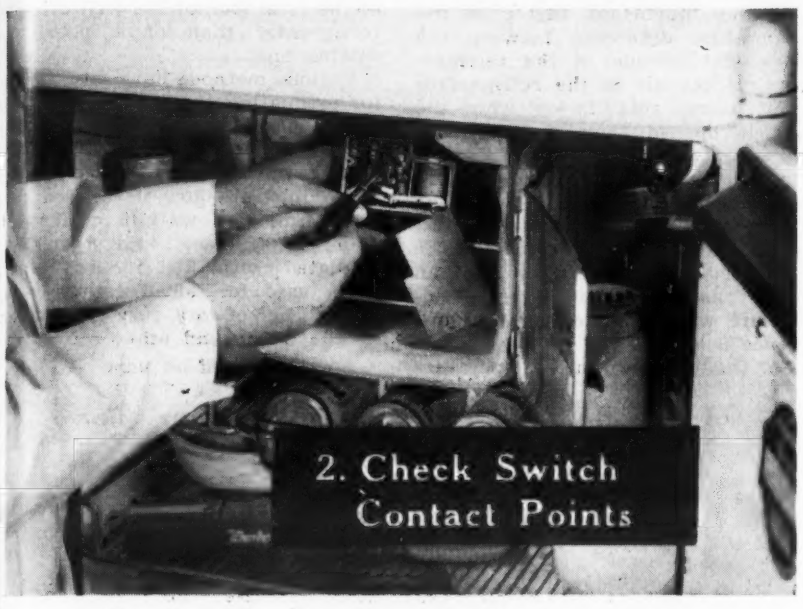
It will cost you nothing to ask us for a quotation on your requirements.

Swan Engineering Company, Inc.
748 Frelinghuysen Avenue
Newark, N. J.

Servicing Meter-Miser Systems

12—*What to Do When Cabinet Is Too Cold*





First, check the switch setting by wedging the bulb of the dial thermometer in place as shown, closing the cabinet door, and observing the temperatures at which the switch cuts in and out.

For an accurate check, the reading should be observed through at least two cut-in and cut-out cycles, with the cabinet door remaining closed throughout the check. The switch should be set to cut in and out at the temperatures recommended in the Service Manual for the particular model.

If the switch is O.K., check the room temperature. In room temperatures of 60° F., and lower, the cabinet may be too cold when the Cold Control is on Number 1. Simply suggest to the user that the Cold Control be set on a warmer position—or in extreme conditions, perhaps the user will move the cabinet to a warmer place.

If the switch and room temperature are O.K., check the switch contact points.

One other thing to remember is that it is necessary to compensate the switch setting for altitude at any point where the altitude is more than 1,000 feet above sea level. See Frigidaire service manual for correct switch settings.

13—*Cabinet Too Warm*

If the cabinet is too warm, there usually is no frost on the freezer. However, a very heavy frost coating may insulate the freezer and cause the same condition. A check with the dial or pocket thermometer will show that the cabinet is too warm.

Member of the National Refrigeration Supply Jobbers Association

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

TED GLOU

CENTRAL SERVICE SUPPLY CO.

516-18-20 E. Erie Blvd., Syracuse, N. Y. Phone 5-4000
209-211 Jefferson Ave., Scranton, Pa. Phone 3-4000

YOUR OWN REFRIGERATION PLANT WILL GIVE MORE PRODUCTION WHEN YOU INSTALL THE NIAGARA Duo Pass AERO CONDENSER

PATENTED

● Reduced compressor head pressure increases your refrigeration capacity and the NIAGARA DUO-PASS AERO CONDENSER provides a sure method of constant operation at lower head pressure. Because, by the evaporative cooling principle, Niagara Duo-Pass Aero Condenser removes 1000 BTU per pound of water evaporated, you save cooling water costs amounting to thousands of dollars.

These gains are permanent because the patented NIAGARA "Duo-Pass" feature lowers the condensing temperatures to the point where no scale or precipitate can be deposited on the condenser tubes to reduce its capacity.

Get Bulletins 91 & 93 for full information.

NIAGARA BLOWER COMPANY

Over 30 Years of Service in Industrial Air Engineering

Dept. AC-85, 6 E. 45th St. NEW YORK 17, N. Y.

Field Engineering Offices in Principal Cities

NIAGARA EQUIPMENT FOR FOOD INDUSTRIES: AIR CONDITIONERS, DEHYDRATORS, COOLERS, "NO-FROST" METHOD OF PRE-COOLING, FREEZING AND HOLDING, AERO HEAT EXCHANGERS, "DUO-PASS" AERO CONDENSERS

★

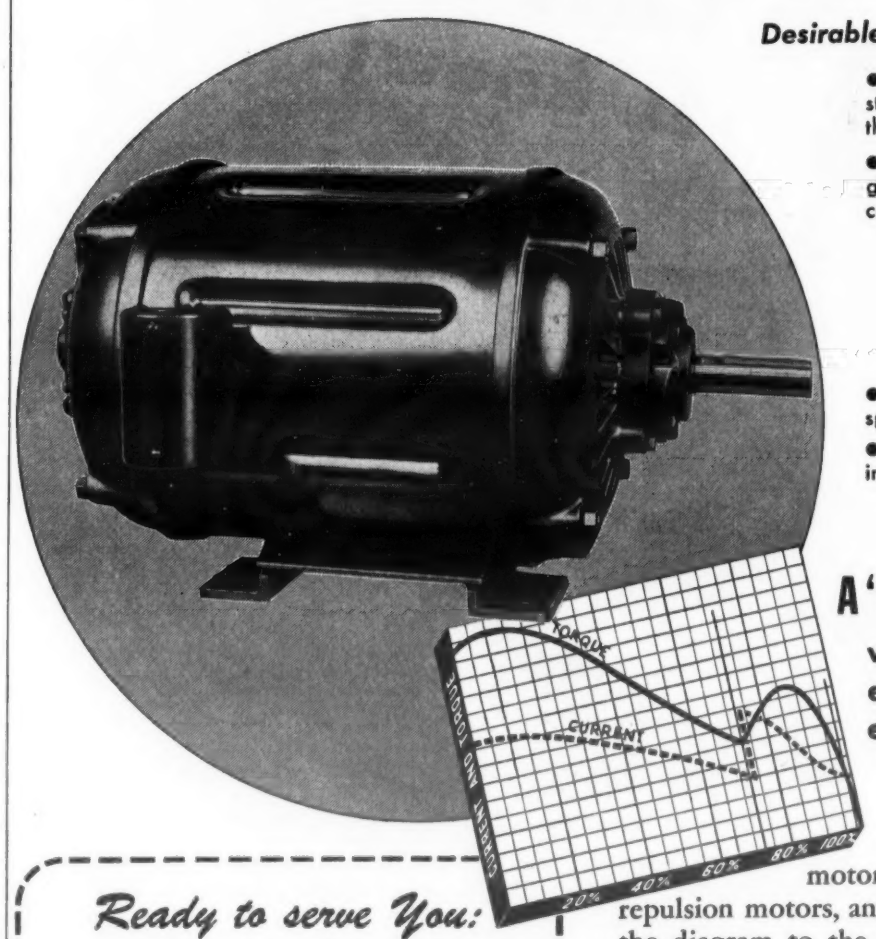
BACK THE ATTACK . . . . . BUY MORE WAR BONDS

★

Wagner REPULSION-START INDUCTION MOTORS ARE

A HAPPY COMBINATION

OF THE BEST FEATURES OF TWO TYPES OF MOTORS



Desirable Features of Repulsion Motors

● High starting-torque enables them to start high-inertia loads and accelerate them smoothly.

● Lowest starting-current of any type single-phase motor, therefore least likely to cause light flicker.

plus

Desirable Features of Induction Motor

● Fairly constant and high operating speed at all operating loads.

● Flat efficiency curve over wide operating range.

means

A "General-Purpose" Motor which handles a wide variety of jobs efficiently and economically.

Wagner repulsion-start induction motors, as their name implies, start as repulsion motors, and operate as induction motors. As the diagram to the left indicates, the motors have a high starting-torque, yet have the lowest starting-current of any type single-phase motor.

At a predetermined speed, the motor is automatically changed to an induction motor by means of a mechanism which short-circuits the rotor winding and lifts the brushes from the commutator. Wagner repulsion-start induction motors are used on mechanical refrigerators, air compressors, pumps, coal stokers, various machine tools, large-size oil burners, coffee and meat grinders, and many other appliances. Wagner type RA motors are famous for their low upkeep cost, minimum servicing, freedom from vibration and noise, and years of reliable service.

M45-18

Ready to serve You:

ATLANTA • BALTIMORE • BOSTON • BUFFALO
CHICAGO • CINCINNATI • CLEVELAND
DALLAS • DENVER • DETROIT • HOUSTON
INDIANAPOLIS • KANSAS CITY • LOS ANGELES • MEMPHIS • MILWAUKEE • MINNEAPOLIS • NEW YORK • OMAHA • PHILADELPHIA
PITTSBURGH • PORTLAND • SALT LAKE CITY
SAN FRANCISCO • SEATTLE • ST. LOUIS
SYRACUSE • TULSA • WASHINGTON, D. C.

MOTORS are but one of several WAGNER PRODUCTS serving industry.
Other WAGNER PRODUCTS:
AIR BRAKES • BRAKE LINING • HYDRAULIC BRAKES • INDUSTRIAL BRAKES • INDUSTRIAL BRAKE CONTROLS • NoRoL • TACHOGRAPH (Recording Speedometer) • TRANSFORMERS

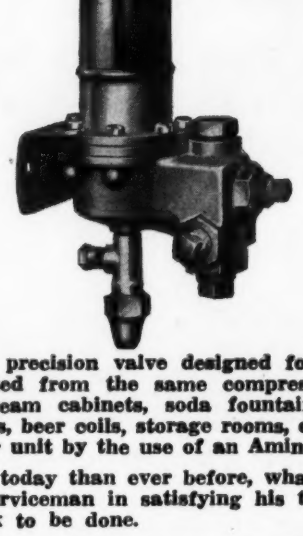
For Complete Information write for Bulletin MU-185

Wagner Electric Corporation
ESTABLISHED 1891
6441 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
In Canada: Wagner Electric at Leaside, Ontario
ELECTRICAL AND AUTOMOTIVE PRODUCTS

SNAP ACTION VALVES
for Multiple Temperature

Adjustable from 20" of vacuum to 63 lbs. pressure

Proven in Performance



Differential 7 lbs. minimum to 29 lbs. max.

Free from bellows strain

Here is a marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of an Aminco Snap Action Valve.

This means more today than ever before, what with the difficulties experienced by the serviceman in satisfying his trade with "too little" material for the work to be done.

Aminco Snap Action Valves are not an experiment. They have proven their worth in years of actual service and are doubly useful under today's conditions when one piece of equipment must do the work of several.

May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either.

As always, our company is definitely interested in the survival of the refrigeration industry and is doing its utmost to cooperate with established operators.

AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT 16, MICHIGAN

Van D. Clothier, 1015 E. 16th St., Los Angeles, Calif.
George I. Boone, 739 G. M. Bldg., 1775 Broadway, New York 19, N. Y.
William H. Cody, 2nd Unit, 10th Floor, Santa Fe Bldg., Dallas, Texas
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Service or Usage Load

Since the Service or Usage Load is not as accurately calculable as the Heat Leakage, Product, or Miscellaneous Loads, the estimator's carefulness, experience, and judgment are of considerable importance when estimating the part of the Total Load imposed by opening and closing the doors, while "working out of" the refrigerator.

When a door or window of a refrigerator is opened some of the colder, heavier air within the refrigerator flows out and is replaced by the lighter, warmer air outside the refrigerator. The oftener the doors are opened and how long they stand open, affects the amount of heat introduced into the refrigerator.

Obviously the doors should remain closed except when it is necessary to put in or take out the food or whatever other product is stored in the refrigerator. Care, or the lack of it, by the user, controls the Service Load.

The type of fixture and the purpose that it serves make a great deal of difference. A butcher may, especially during rush hours, open the doors of a display case often or even leave them open continuously for certain periods. During that same period he may not open his "walk-in" cooler more than a few times.

A restaurant kitchen refrigerator is very heavily used, especially during the eating hours. "Self-serve" refrigerators in grocery stores are apt to be left open more than where an attendant only has access to the refrigerator, especially if he is the owner-manager type.

Another important factor is the temperature difference between the inside and outside of the refrigerator. If the air in the refrigerator is 10°, more "cold" is lost when the door is opened than if the inside temperature is 40°. With an outside temperature of 80° the temperature difference would be 70° between the outside at 80° and the inside at 10°, so naturally more heat would be introduced into the refrigerator than in the case of the 40° inside temperature where the temperature difference is 40°.

So the greater the temperature difference the greater will be the loss of refrigeration due to opening of doors, that is, due to the service load.

Comparatively there is a greater loss of refrigeration where the door of a small refrigerator is opened than the door of a large refrigerator, so a usage factor must be greater for a small than a large refrigerator. Moreover, the loss is relatively greater for a refrigerator having good insulation than if it has poor insulation.

The service load in B.t.u. per hour of the two might perhaps be the same, but it would be a greater percentage of the heat leakage load and of the total load of the well insulated refrigerator than of a poorly insulated one.

Various methods have been devised for estimating the service load. The table below is based on the B.t.u. per 24 hours per cubic foot of the refrigerator capacity.

To illustrate how it is used take, for example, a walk-in cooler 8 ft. wide, 10 ft. long, and 8 ft. high, insulated with 3½ in. of mineral wool, used for "dead" storage (not worked out of to a very great extent as the meats and other refrigerated

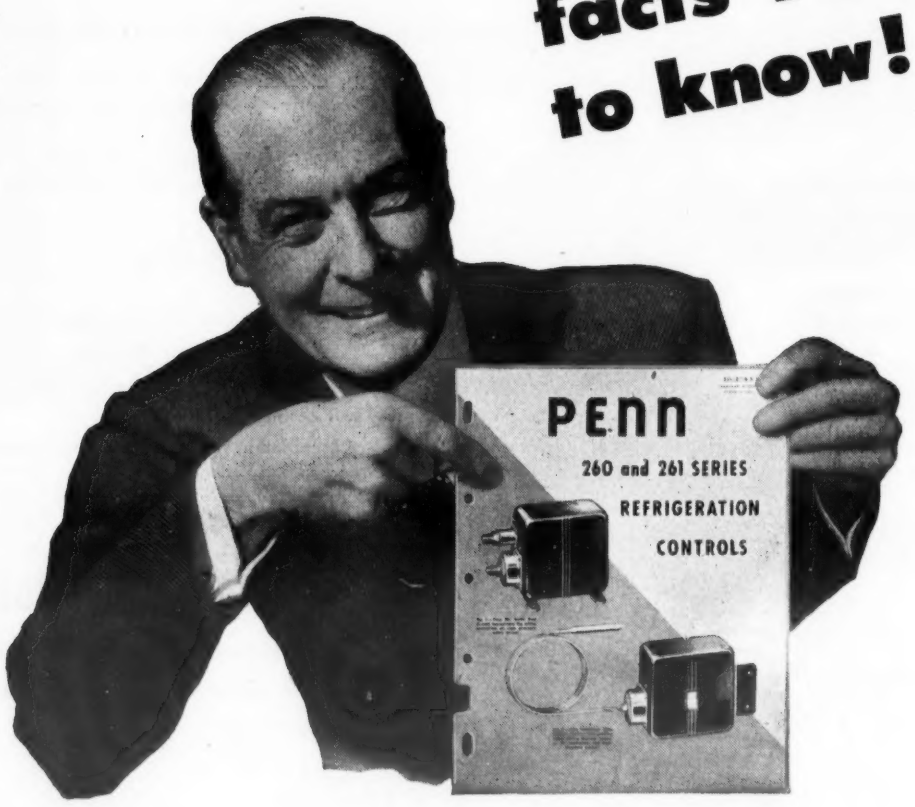
(Concluded on next page)

Usage Heat Loss, B.t.u. Per 24 Hours For One Cu. Ft. Interior Capacity

Volume Cu. Ft.	Service	Temperature Reduction in °F. (Room temperature minus box temperature) 40	45	50	55	60	65	70	75	80
15	Normal	108	122	135	149	162	176	189	203	216
	Heavy	134	151	168	184	201	218	235	251	268
50	Normal	97	109	121	133	145	157	169	182	194
	Heavy	124	140	155	171	186	202	217	233	248
100	Normal	85	96	107	117	128	138	149	160	170
	Heavy	114	128	143	157	171	185	200	214	228
200	Normal	74	83	93	102	111	120	130	139	148
	Heavy	104	117	130	143	156	169	182	195	208
300	Normal	68	77	85	94	102	111	119	128	136
	Heavy	98	110	123	135	147	159	172	184	196
400	Normal	65	73	81	89	97	105	113	122	130
	Heavy	95	107	119	130	142	154	166	178	190
600	Normal	61	68	76	84	91	99	106	114	122
	Heavy	91	103	114	125	137	148	160	171	182
800	Normal	59	67	74	81	89	96	104	111	118
	Heavy	89	100	112	123	134	145	156	167	178
1,000	Normal	57	64	72	79	86	93	100	107	114
	Heavy	86	97	108	119	130	140	151	162	173
1,200	Normal	55	62	69	76	83	90	97	104	110
	Heavy	84	95	105	116	126	137	147	158	168
1,600	Normal	51	58	64	70	77	83	90	96	102
	Heavy	79	89	99	108	118	127	138	148	158

From the A.S.R.E. Refrigerating Data Book.

This bulletin has facts YOU want to know!



• You'll want a copy of this news-packed bulletin. It's filled with vital facts on PENN 260 and 261 Series Refrigeration Controls. Complete with pictures and diagrams, it will show you how to provide adequate protection for deep freezers and commercial low temperature boxes.

The 260 Series are "single" temperature or low side pressure controls. Built in single pole construction, they close the contacts on temperature or pressure rise and open the contacts on temperature or pressure drop. The 261 Series Dual Control incorporates the added protection of high pressure safety cut-out.

Send for your copy of this helpful 8-page bulletin today. You'll find it a real aid in assuring adequate protection for critical food supplies . . . and it's yours absolutely free. Simply ask for Bulletin R-260-D.

Write *Penn Electric Switch Co., Goshen, Indiana.* Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.

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AUTOMATIC CONTROLS
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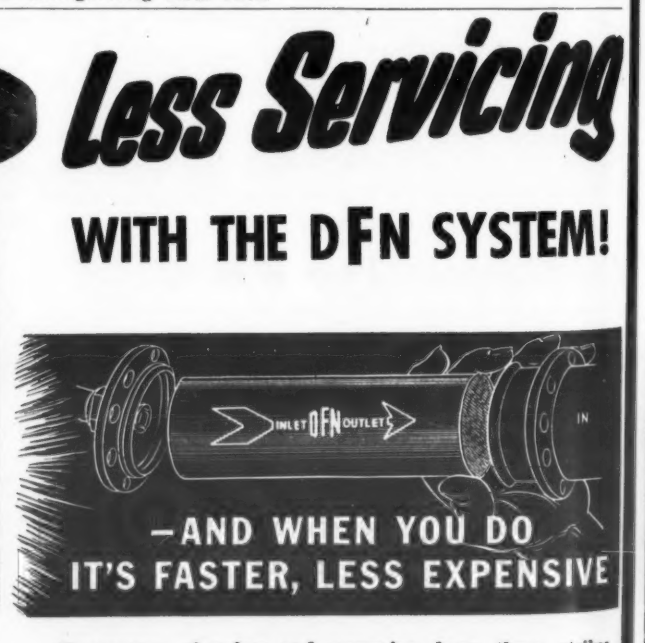
WITH THE DFN SYSTEM!



—AND WHEN YOU DO IT'S FASTER, LESS EXPENSIVE

Freeze-ups, clogging and corrosion have three strikes against them when your installations are equipped with the DFN System. You get unmatched triple protection against moisture, sediment and acid—reducing a major cause of shutdowns!

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Using the factory-packed, hermetically sealed DFN Cartridge assures the correct quantity and density of dust-free drying and neutralizing agents in each charge. No danger of refrigerant by-passing due to loose packing. Exclusive DFN strainer-filter design filters to minute size, holds more sediment without pressure drop. For full size information on how DFN can lick your drying problems, ask your distributor or write us for Catalog R-7.

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Only the DFN SYSTEM DEHYDRATES FILTERS NEUTRALIZES

DEHYDRATORS • STRAINERS FILTERS • NEUTRALIZERS

Service Load--

(Concluded from preceding page)

foods are dispensed out of kitchen reach-in refrigerators).

An average temperature of 37° is to be maintained in the refrigerator. The location is the north central part of the United States where the design summer temperature is 85° to 90° (average about 87°).

All of the meat comes from the packing house pre-cooled and the main product load consists of about 300 pounds daily of vegetables and fruits and 200 pounds of butter, lard, etc., put in at room temperature. Seventy-five watts are allowed for the blower coil fan motor.

The outside area of the cooler is 448 sq. ft. The k factor for mineral wool is .26 B.t.u. per hr. per sq. ft. per degree temperature difference. Ignoring the insulating value of the wood lining and outer sheathing, the heat leakage is:

* * *

448 (sq. ft.) × .26 (k) × 24 (hrs.) × 50 (td) / 3.5 (inches thick) = 39,936

Heat Leakage Load ..... = 39,936 B.t.u.

Three hundred pounds of vegetables and fruits
300 (lbs.) × .90 (avg. spec. heat) × 50 (td) = 13,500

Two hundred pounds of butter and lard
200 (lbs.) × .50 (avg. spec. heat) × 50 (td) = 5,000

Product Load 13,500 plus 5,000 ..... = 18,500 B.t.u.

Heat from blower fan motor
75 (watts) × 3.42 (B.t.u./watt) × 24 (hrs.) = 6,156
(Other miscellaneous heat loads negligible)

Miscellaneous Load ..... = 6,156 B.t.u.

The wall of this cooler is 5 inches thick, so the volume is:
9'2" (length) × 7'2" (width) × 7'2" (height) = 471 cu. ft.
(Inside measurements)

* * *

Thus, having a volume of 471 cu. ft. would require using the factor in the 400 row in the table, and as the service is "normal" instead of "heavy" the factor to use, with a 50° temperature difference is 81 B.t.u. per cu. ft. per 24 hours.

471 (cu. ft.) ×
81 (B.t.u.) ..... = 38,151
Service (Usage)
Load ..... = 38,151 B.t.u.

Total Heat Load Per 24 Hrs.

Heat Leakage....	39,936
Product	18,500
Blower Motor Heat	6,156
Service Load	38,151
Total Load	102,743 B.t.u.

In order for the refrigerating equipment to operate about two-thirds of the time (16 hours out of the 24), under these conditions, a condensing unit and an evaporator having a capacity of (102,743 ÷ 16) about 6,421 B.t.u. per hour would be required. On the basis of a 25° evaporator this would be somewhat too heavy a load for an average ½ hp. condensing unit, so a ¾ hp. unit would be used.

If the ¾ hp. unit had a capacity of about 8,000 B.t.u. per hour it would need to run only about 13 hours out of the 24, provided an evaporator of proper capacity to balance the condensing unit at about 25° evaporator temperature, was also used.

San Diego Commercial Firm Starts Work on Its New Building

SAN DIEGO, Calif.—Construction of a new building with 100 ft. frontage and a depth of 200 ft. has been started at 4025 Pacific Highway here for Wright Refrigeration Service, commercial distributorship.

Headed by Bob Wright, the firm handles Hussmann meat cases, walk-in coolers, and reach-in boxes; Bastian-Blessing soda fountains and luncheonette equipment; Magic Chef restaurant ranges, as well as a line of home freezers, bar, and store equipment.

The new building will be located on a 200 ft. by 200 ft. corner lot adjacent to the Consolidated Aircraft plants and will have ample parking space.

Westinghouse Orders Up

EAST PITTSBURGH, Pa.—Orders received by the Westinghouse Electric Corp. in the first half of this year increased 13% over the same period of 1944 and amounted to $505,243,144, it was announced recently by A. W. Robertson, chairman.

Unfilled orders as of June 30 amounted to $547,442,497. Mr. Robertson said this compared with $767,125,246 a year ago.

FOOD MUST BE CONSERVED

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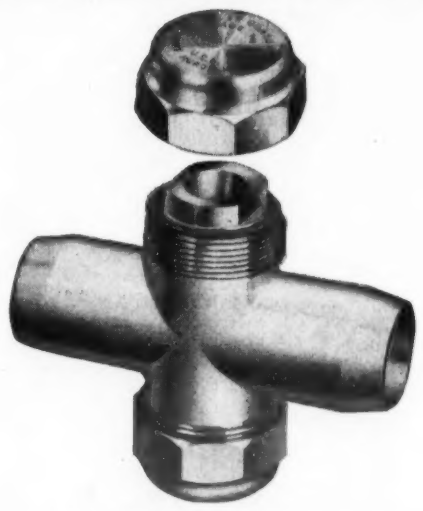
WILL NOT LEAK



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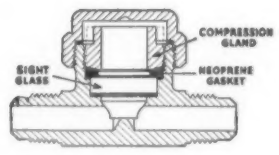
WITH SEAL CAP

The improved design of our liquid indicators is effective assurance against refrigerant leakage around the sight glass. The sight glass is sealed into the forged brass body by a heavy Neoprene gasket which, in turn, is compressed by a packing gland, which forces the pliable gasket along the sides of the glass and produces a perfect seal.



Mueller Brass Co. Liquid Indicators are made in a complete range of styles and sizes. The seal cap and open port type may be installed where light conditions are favorable. Where the light is poor, we recommend the use of our double port liquid indicators illustrated here. By flashing a light through one port, the exact condition of the refrigerant may be determined through the other port.

The new design of the compression gland permits the use of standard wrenches for tightening.

NOTE: All models of Mueller Brass Co. filters and line strainers may be obtained with female flare connections on one end. This makes it possible to assemble any desired filter to a liquid indicator for installation in the liquid line of the system.

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Army Installations Like These Keep Engineers Busy

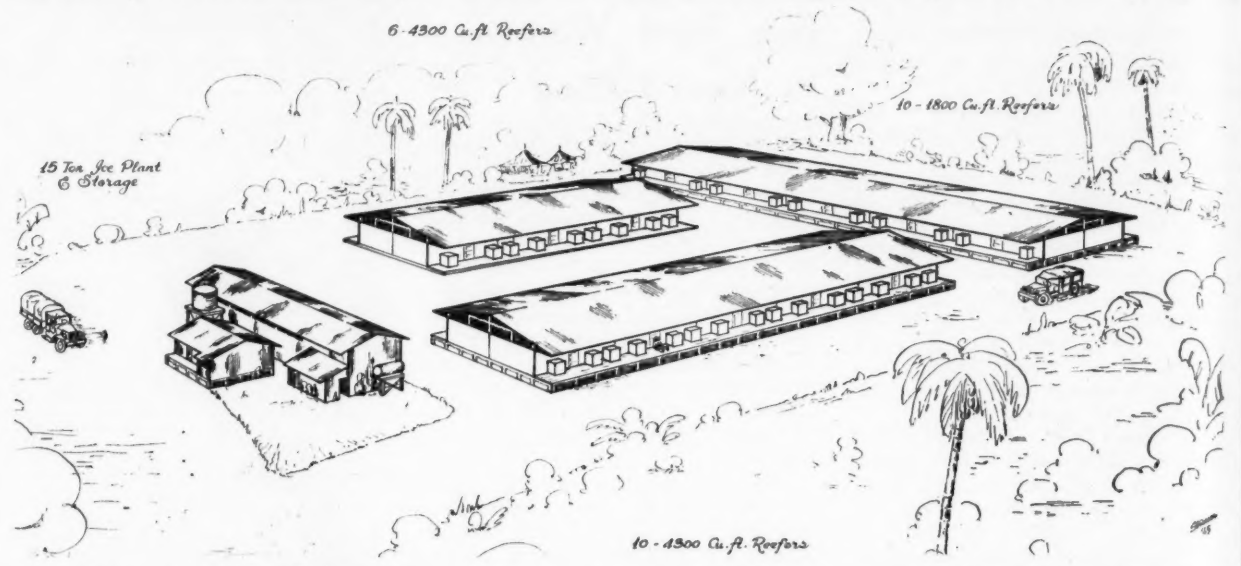

Fig. 1—This sketch of an Army base in the Pacific area indicates how much refrigeration equipment is employed to store food for fighting men. The 15-ton system operates 26 large coolers.

* * *

How Army Refrigeration Workers Operate at Bases in Pacific

By First Lieutenant Don Dickinson and Technical Sergeant Allen C. Rivers

Since a great portion of the production of the refrigeration industry is for the armed forces, the installation, operation, and maintenance of this equipment is no small project in itself. In the army the greatest share of the burden falls to the Engineers, to the refrigeration maintenance detachments, and similar organizations.

These units not only maintain and repair, but also construct and operate the larger installations, possessing the skilled technicians required for this work.

What follows is mainly the experience of one such detachment in the Pacific theater, but that of others is also incorporated so as to present an overall perspective of the way refrigeration maintenance is handled by the Army in this theater of operations.

In a previous article* concerning army refrigeration maintenance in the Southwest Pacific, we stressed mainly the technical aspects of the subject, the effects of a wet and sultry tropical climate on operation and repair of refrigeration machinery. Here we will go into more detail concerning the organization itself; its equipment, its personnel, and its operation. . . .

Though the responsibility for refrigeration maintenance has long been a mission of the Corps of Engineers, the organization of detachments solely for this purpose is of fairly recent origin. Formerly the policy was to have experienced mechanics placed on detached service with the Base Utilities Section from other organizations on the same base or other bases. These men were selected for their special qualifications which more often than not could not be utilized by their parent organizations.

But men away from their outfits for long periods soon develop a feeling of being orphans, casuals living with a company but not being part of it. Then too, promotions come slowly because the parent unit has no opportunity to observe the capabilities and progress of the men away on detached service.

But what is more important, the equipment and tools and transportation are lent by the Base Engineer as the need arises—there is in no sense a balanced organization at all.

It is quite apparent that the desirable way was to organize small engineer detachments with their own equipment and personnel, and a definite mission. This was done in many cases, and in other instances provision was made for refrigeration maintenance in existing engineer utilities companies, along with the electric power and water supply services.

It is mainly these two arrangements which exist in the Pacific theater at present. The writers are fortunate in being in a detachment of the former type, devoted exclusively to refrigeration.

Such a unit consists of one officer and about 20 enlisted men. These are both high and low pressure mechanics, welders, electric motor repairmen, and a general mechanic to maintain the vehicles of the organization. There are several jeeps, and

*March 26, 1945 issue of Air Conditioning & Refrigeration News.

(Continued on next page)

Big Shop Needed To Maintain Units

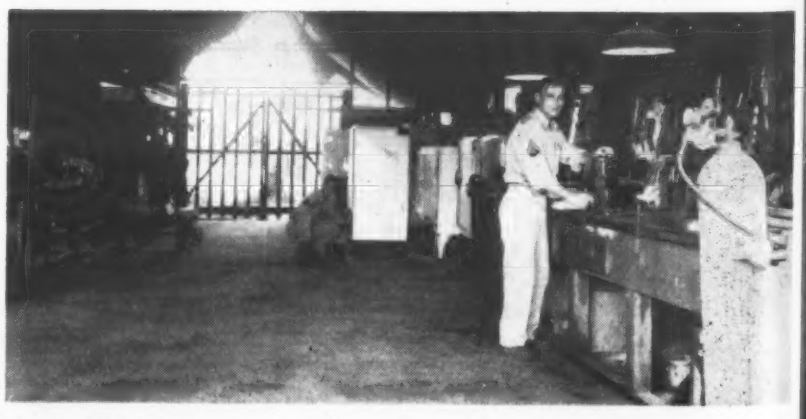

Fig. 2—This shows some of the shop equipment employed to maintain refrigerators of all types. The co-author of this article, T/Sgt. Rivers, is shown in the background repairing a domestic unit.

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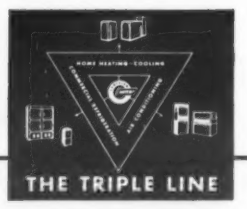

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Preparing To Service a Ship's Refrigerator

Fig. 3—Two mechanics are loading tools and equipment to repair refrigeration equipment on a ship standing offshore from the Pacific island Army base.

* * *

Snipers No Help To Repairmen

(Continued from preceding page)

one or two light trucks.

The main piece of equipment is a motorized shop unit for general purpose repair, a complete, compact machine shop mounted on a 2½ ton truck chassis and possessing its own generator for power. Though mobile, the shop is usually blocked up in the bivouac area and used there.

These being critical items and not always available, a special authorization for shop tools is then obtained, enabling the detachment to set up its own repair shop in a small prefabricated building. In addition, each mechanic has his own set of service tools.

Such an organization has what is known as a high table of ratings, which means that nearly all the men are corporals or higher. In fact the table calls for only one private, and even he can be promoted to a corporal. It all makes for a very desirable and almost nonexistent unit in which everybody is a noncommissioned officer. This then is the organization. Let us see how it operates.

We will follow it into a newly established island base, watch it set up, show how it organizes for operations, what sort of work it is expected to handle, and the principal makes of refrigeration units it is likely to encounter in the Pacific.

Contrary to what some of the men write in their letters home, the detachment does not "hit the beach a-shootin'." It is true, however, that often the fighting is not many miles away.

When establishing a beachhead the service troops quickly follow the combat troops ashore, for a base must be rapidly established to service the combat units in their offensive. And it is not generally known that infantry battalions possess their quota of refrigeration too, for they are not always fighting.

The refrigeration detachment may come in on an LST from a few days to several weeks after the initial landing. And even then the area may not be entirely cleared of sniper fire. At one base the Japs were within 15 miles for several weeks after the detachment landed.

Two men of another detachment in the Philippines once had a service call from an organization back in the hills. They were cautioned to take along their carbines. All went well until the return trip. Speeding through a narrow pass the jeep was struck below the windshield by a sniper's bullet, which passed between the two men and imbedded itself in a barracks bag full of clothing. They did not pause to use their weapons but, as they put it, "took to the air" in their jeep.

Recounting their experience later, the driver was not so much concerned with their narrow escape as over the fact that the bullet had punctured his canteen, soaking all his clothes in the barracks bag!

Coming to the new base the detachment is assigned a bivouac area. It is attached to a larger engineer organization for rations only, for although the small unit is complete in itself the detachment is not large enough to run its own mess hall.

Other outfits are unpacking and need help in getting their refrigerators set up and operating. These are busy days and there is plenty to do. A notice is put in the Daily Bulletin as to where to call for refrigeration service, but once the fancy sign is nailed up the word gets around soon enough.

We have developed a standard form on which to register all service calls; it gives the organization and its location, the type of refrigerator, and the complaint. This is passed on to the service mechanic who works that area in his jeep.

In addition, he leaves a "calling card," another mimeographed form on which is written the repairs he made. If this were not left at the job there would be a dozen calls a day to the shop asking why the mechanic left an unfinished job, when it turned out to be a three-day project. If major repairs or overhauls are necessary, the machine is brought into the shop.

And all the while living conditions are being improved. Showers are installed and the washing machine is set up. Mattresses begin to appear from somewhere; wire screening, wood for tent floors, light fixtures, and a host of other things are acquired by various processes. It is a constant source of amazement how quickly the American soldier can transform a jungle wilderness in "a home away from home."

On large bases are units of the armed forces of allied nations in addition to our own army. The detachment will serve them when help is requested.

And it will be necessary to service ships in the harbor. These vary in size from the small inter-island "F" boats up to the big Liberty and Victory ships, and the larger troopships. But seldom navy vessels.

Servicing ships is one of the toughest maintenance assignments. It presents difficulties quite apart from refrigeration repair. If the ship is not docked the mechanics are taken out in a harbor craft. Sometimes a small cabin cruiser is placed

(Continued on next page)

Mobile Refrigerator Built In Australia

Fig. 4—Produced in Australia, this mobile refrigerator has a capacity of 220 cu. ft. It is powered by a Kelvinator 1-ton methyl chloride unit driven by a gasoline engine.

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Superintendent to head all production in Machine Shop, Assembly Room, and High and Low Sides Department, including dehydration, charging and testing. Man must be thoroughly experienced and energetic. This position has a good future and is with a nationally-known producer of refrigeration equipment. State qualifications and experience. Present organization knows of this inquiry. Box No. 1762, Air Conditioning & Refrigeration News.

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Yet, many refrigeration systems still use outmoded bare-pipe coils. It will pay you to install modern MARLO Fin Coils for:
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Refrigeration Mechanics at Pacific Bases Find Service Work on Board Ship No Cinch

(Continued from preceding page)

at the disposal of the detachment for ship maintenance, and this makes it handy for fishing trips as well.

As any sailor will tell you, boarding a violently tossing ship from a small craft has its own problems. You cautiously step for the pilot's ladder and suddenly find it has risen to the height of your chin. Then the small craft drifts away, leaving you with one foot on the rope ladder and the other on the deck of the cruiser. During a particularly rough spell one mechanic fell into the water three times in less than a week, to the great delight of the sailors on board. No tools are lost however, for these are hauled up with a rope after the mechanic has boarded.

Once aboard, the ailing machine is finally located far back in a dark corner. And the ship is still pitching. Whether you work with one hand clutching a support or sitting flat on a greasy floor plate is strictly a matter of personal preference. Mechanics are sent in pairs for this work. The technical details of ship maintenance were discussed in the former article.

In spite of all this the men like ship work, because a meal aboard a Liberty ship far surpasses army chow. And ships bound for the States can usually be talked out of much of their refrigeration spare parts.

Issue of refrigerators to organizations does not concern the Engineers particularly. Except for the very large boxes this is a Quartermaster function. It can be said that the machines over here are predominantly Australian.

The mobile unit shown in Fig. 4 is made in Adelaide, Australia, has a Kelvinator one-ton methyl chloride unit, and is driven by a Ronaldson and Tippert gasoline engine, also built in Australia. The storage capacity is 220 cubic feet.

Fig. 5 shows a 600 cubic foot portable refrigerator with a 2-ton methyl chloride unit made in Sydney by York. Although usually powered by an Allis Chalmers engine, the one illustrated has an electric motor.

When moving this refrigerator, after pumping it down, the lines are merely disconnected, the doors closed, and the condensing unit is ready to go. If it is to be taken to another part of the same base the two boxes are simply picked up with a mobile crane and set on a 20-ton trailer. But if it is to be transported by water the cooling box must be dismantled and crated.

The ton-and-a-half ice plant in Fig. 6 is at a general hospital. Hospitals always have a great deal of refrigeration machinery; ice plants, ice cream freezers, X-ray machines, and domestic boxes for storing serums and vaccines. This particular plant is a Gordon, and a similar one is built by Budge, both of Australia. The prime mover is an Allis Chalmers or Dodge engine.

The biggest refrigerated barge we have seen has a capacity of 600 tons of rations while in transit, or 1,750 tons if it is to be used for fixed port storage. There are 10 cold rooms, each of which can be maintained at a separate temperature. The lowest temperature is usually 5° F., but this is not the minimum.

Two York eight cylinder 6¾ inch x 5 inch compressors handle the "Freon," which in turn cools the brine that is pumped to the storage rooms. Either compressor is capable of holding the temperature once the load is cooled. Four Worthington 125 KW Diesel generators supply power for the 125-hp. motors for the compressors; two generators working simultaneously can take care of all the power needed for the barge.

These barges are also equipped to produce five tons of ice and up to 2,000 pounds of ice cream a day. A six cylinder booster compressor is used for the ice cream freezer, the "Freon" being brine cooled.

(To Be Continued)

Much Australian Equipment Is Used

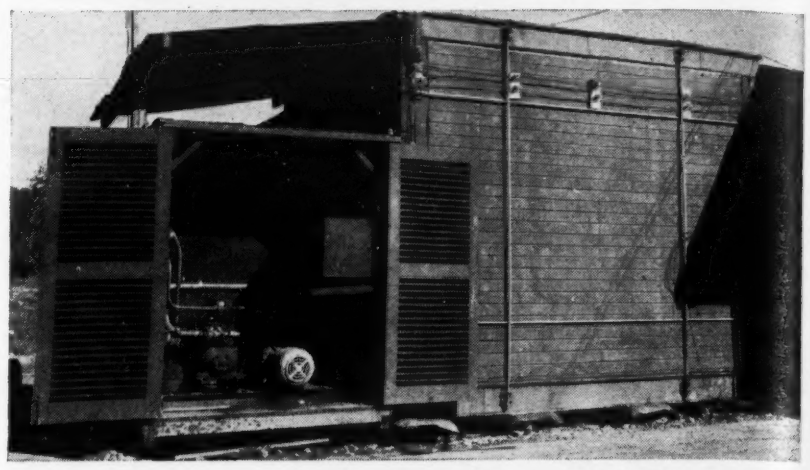


Fig. 5—This 600 cu. ft. portable refrigerator was built in Australia by York. Refrigeration is supplied by a 2-ton methyl chloride unit.

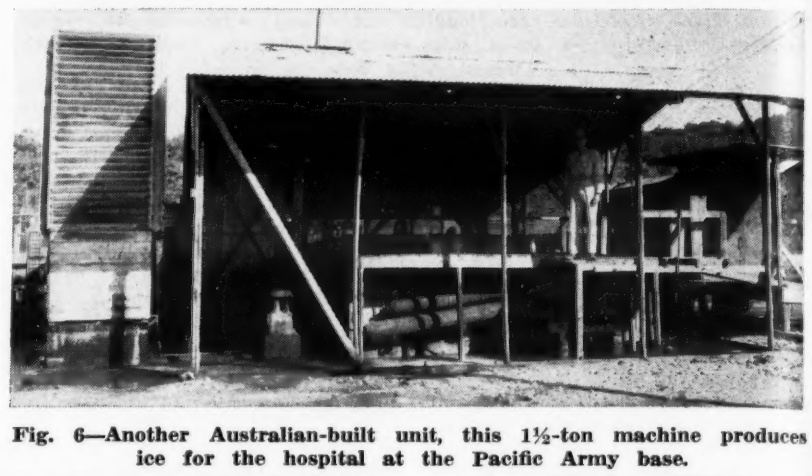
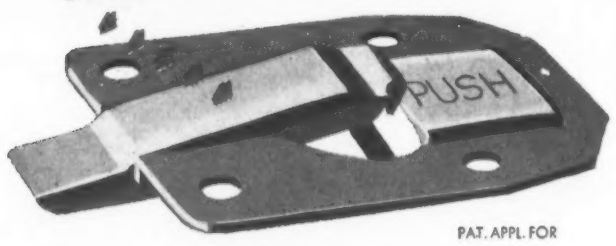


Fig. 6—Another Australian-built unit, this 1½-ton machine produces ice for the hospital at the Pacific Army base.

CUT MAINTENANCE TIME WITH THE NEW HARTWELL FLUSH DOOR LATCH

PRESS and it's locked shut!



PAT. APPL. FOR

Designed for use on combat planes, the Hartwell *flush* latch speeds the opening and closing of access doors. It can be used on metal, plastic or wood, and on doors of varying sizes and thicknesses. It can also be used on cover plates, cabinet and locker doors and flush fixtures. The Hartwell *flush* latch is made of stainless steel, and can be supplied unmounted or spotwelded to an installation plate.

For detailed information about uses and adaptations of the new Hartwell *flush* latch, write: Engineering Department, Hartwell Engineering Company.

HARTWELL
ENGINEERING COMPANY
Designers • Manufacturers • Distributors
3417 Crenshaw Boulevard, Los Angeles 16, California
Dallas, Texas • Kansas City, Kansas

. . . For Extra Protection Against Leakage
IMPERIAL TRIPLE-SEAL FITTINGS

The Flare Fitting that remains LEAKPROOF even when the seat has been badly nicked or marred

The Imperial Triple-Seal Flare Fitting brings you new, extra protection against leakage in refrigeration tubing connection work.

This fitting is the same excellent SAE refrigeration type Flare Fitting you have used before *except that it has an important improvement.* It is made with a groove in the seat. When the flare is drawn up against this groove the copper tubing is extruded into the groove making a tight, self-seating joint. This joint will remain leakproof even though the face of the seat may be badly nicked or marred.

This extra seal of safety is of greatest importance in refrigeration work because it gives you Triple-Seal tightness in every joint. And remember, Imperial Triple-Seal Fittings cost no more than ordinary fittings.

THE IMPERIAL BRASS MFG. COMPANY, 565 South Racine Avenue, Chicago 7, Illinois

IMPERIAL
FITTINGS • VALVES • DEHYDRATORS • FILTERS • FLOATS • CHARGING LINES • TOOLS FOR CUTTING, FLARING, BENDING, COILING, PINCH-OFF AND SWEDGING

Heads Deepfreeze Adv.

RHOADES V. NEWBELL

Is now advertising and sales promotion manager for Deepfreeze Division, Motor Products Corp.

Crosley Sale--

(Concluded from Page 1, Column 2)

ments on the transaction are said to total nearly $22,000,000.

Raymond C. Cosgrove, vice president and general manager of the Crosley manufacturing division, and James D. Shouse, vice president in charge of the broadcasting division, will continue in these posts and also remain on the board of directors.

Powel Crosley, Jr., will remain a director, and Lewis M. Crosley will continue as vice president.

Other officers of the company include Walter Mogensen, treasurer; Raymond S. Pruitt, secretary and general counsel; and Edwin J. Ellig, assistant secretary-treasurer.

The new Crosley board of directors now includes Messrs. Babcock; Pruitt; Cosgrove; Shouse; Victor Emanual, chairman of the Avco board; Powel Crosley; Robert E. Dunville, vice president and general manager of radio station WLW; William F. Wise; and John J. Rowe.

First G-E's--

(Concluded from Page 1, Column 4)

equipped with an indicator that notifies the user when to defrost. There are three welded steel shelves and a glass chiller tray fitted directly under the super-freezer. The cabinet exterior is finished in white liquid plastic; the interior in white porcelain.

Two other refrigerator models will follow the LB7 into production soon. They are a 6-cu. ft. version of the forerunner and a 7-cu. ft. deluxe model.

All three models are the same as those made just before the war. "This had to be," Mr. Andrews said. "because we couldn't take the time to acquire the new tools, dies, and fixtures that are needed to produce any brand new appliance.

"It was necessary to get into production immediately in order to maintain our high level of employment."

All G-E Refrigerators To Be Made at Erie

ERIE, Pa. — General Electric's postwar refrigerators will be completely manufactured and assembled in the company's Erie Works, H. L. Andrews, vice president in charge of the G-E Appliance & Merchandise Department, announced.

Before the war, production was split. Cabinets were made in Erie while G-E's hermetically sealed refrigerating units were made in Schenectady, N. Y. Final assembly was at Erie.

Henceforth, Mr. Andrews said, both cabinets and mechanisms will be built at Erie and then assembled for shipment.

"This change is being made in order to assure better all-around production results," Mr. Andrews said.

Carrier Expands--

(Concluded from Page 1, Column 5)

lies in the South, it was declared by Arthur P. Shanklin, vice president of the corporation, in addressing a dinner meeting July 12 of representatives of the firm and guests, gathered in celebration of the opening of the expanded quarters.

W. H. Driscoll of Jersey City, another vice president, also forecast a great opportunity in the Southeast for air conditioning and announced that the company plans to open up branch offices in strategic locations throughout the South. These will be under the jurisdiction of the Atlanta office, headed by C. V. Fenn.

Dr. Willis H. Carrier of Syracuse, president of the corporation, told the dinner session that one of the firm's greatest developments, especially for the South, was the recently developed individual room heating and temperature control system.

Haines Heads--

(Concluded from Page 1, Column 5)

mercial Controls Department would involve six sales divisions of the company, including the air conditioning controls division, refrigeration controls division, moduflow division, railway controls division, apartment controls division, and the aeronautical division.

Also announced by the company were the promotions of two new zone managers in the air conditioning controls division. H. R. Canoyer, formerly with the modutrol division in Philadelphia, Baltimore, and Washington, has been made sales manager of the central zone, with headquarters in Cleveland.

M. S. Hamilton, Atlanta, is sales manager for the southeastern zone. Mr. Hamilton, until his recent honorable discharge from the service, was a major with the First Army in Europe, and was wounded in the invasion of Normandy.

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION
47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

"RECOLD"
WATER DEFROST
'RECOLD' COILS WATER-DEFROST
CANADA PAT. 394,709 NEW ZEALAND PAT. 87,350
U.S. PAT. 2,218,393
REFRIGERATION ENGINEERING Inc.
LOS ANGELES • CALIFORNIA

TRUCK
Immediate Delivery
Rubber Tired Wheels
NOW! "Handee Andy" all purpose tube steel 600 lb. cap. Full size, first quality, not a wartime makeshift. Light wt. very easy to handle. Ht. 44" .14" wide at nose. Curved cross pieces. The only truck we sell. Specializing permits a better truck, and more of them! By mail only at present time. Fully guaranteed. F.O.B. 1% 10 days. Unrated firms cash with order. Clip this.
9.95 Lots of 12
Lots 3, $11.85 Single, $12.85
The HANDEES CO., Dept. 25F7 Bloomington, Ill.

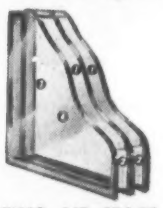
Originators of The Cross Fin Coil
LARKIN
Refrigeration Products
See Your Jobber or Write Direct
LARKIN COILS, 519 Memorial Drive., S.E., Atlanta, Ga.
Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—

New
M&E
Unit Coolers
(IMPROVEMENT NO. 3)
EVEN DISTRIBUTION OF COOLED AIR
Maintains an even temperature in all levels of the cabinet, thereby preventing "dead spots"
THE PEAK OF REFRIGERATION
MERCHANT & EVANS CO.
2035 WASHINGTON AVENUE, PHILA. 46, PA.
PIONEER MANUFACTURERS OF FIN-TUBE PRODUCTS
DEPENDABLE FOR REFRIGERATION AND AIR CONDITIONING

ELIMINATE FOGGING IN YOUR CASES

WITH Thermopane

4 important features of Thermopane



1. INSULATING AIR SPACE. The layer of air inside the Thermopane units is scientifically cleaned, dried and hermetically-sealed at the factory. This sealed-in air gives Thermopane its high insulating efficiency.
2. BONDERMETIC SEAL. This patented, weatherproof, metal-to-glass seal bonds the panes of glass into one unit to prevent dirt and moisture from entering the air space.
3. CLEAR VISION. The dry air is sealed in with the patented bond to prevent frost or condensation from forming on the inner surfaces of the panes of glass.
4. ONLY TWO SURFACES TO CLEAN. The glass surfaces inside a unit are specially cleaned at the factory . . . and stay clean!

You can avoid "Case Fogging" in your postwar products . . . give your equipment greater *see-ability* and *salesmanship* by glazing it with *Thermopane*, the multiple-glass insulating unit developed and patented by Libbey·Owens·Ford.

This factory-fabricated unit is easily installed . . . requires less work than installing an equal number of lights of regular glass. It reduces field maintenance. And, most important, *Thermopane* gives your frozen food cases the extra salesmanship of uninterrupted, fog-free vision.

Don't overlook *Thermopane* and its many advantages in your postwar cases. Ask your nearby L·O·F Distributor for details, or write Libbey·Owens·Ford Glass Company, 6685 Nicholas Building, Toledo 3, Ohio.

L O F
LIBBEY·OWENS·FORD
a Great Name in GLASS

Trade Marks Registered

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
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PURO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.

Over 700,000 In Use

Investigate the NEW

MASTER Food Conservator

Sold thru refrigeration and insulation distributors. Write for particulars.

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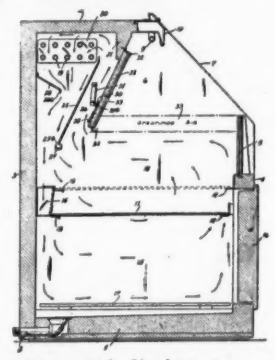
Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves

ALCO VALVE COMPANY • ST. LOUIS, MO.

PATENTS

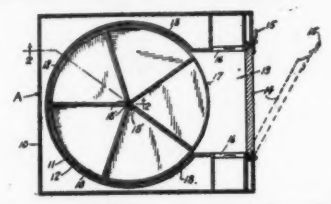
Weeks of July 10 & 17

2,379,885. REFRIGERATED DISPLAY CASE. Russell E. Davis. St. Louis, Mo., assignor to Hussmann-Ligonier Co., St. Louis, Mo., a corporation of Missouri. Application Dec. 3, 1943, Serial No. 512,695. 8 Claims. (Cl. 62—89.5.)



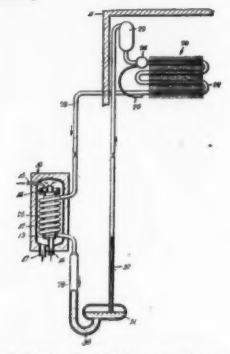
1. A refrigerated display case comprising a base, end walls, a low front wall, a high rear wall, a top wall projecting from said rear wall above the level of said low front wall and terminating short of the latter, a refrigerating device in the top of said case above the level of said low front wall, a curtain wall depending from said top wall and in front of and extending below said refrigerating device, and means for selectively holding part of said curtain wall in such position that the bottom edge thereof is located a sufficient distance below the top edge of said low front wall to create a buffer layer of stratified air in said case between the air circulating therein and the atmosphere external thereto or in such position that said bottom edge is located a sufficient distance above said top edge to cause a spillage of air from said case over said top edge and a consequent infiltration of exterior air into said case.

2,380,005. REVOLVING SHELVING FOR REFRIGERATORS AND THE LIKE. William E. Wilson, Los Angeles, Calif. Application May 18, 1944, Serial No. 536,189. 3 Claims. (Cl. 312—183.)



1. A cabinet of the character described, comprising a casing having upper and lower sockets, a series of sector-shaped shelf sections having sector-shaped shaft sections at their inner ends forming a shaft rotatably mounted in said sockets.

2,380,029. REFRIGERATION. John Davidson, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application July 5, 1940, Serial No. 343,941. 1 Claim. (Cl. 62—125.)



A closed heat transfer system devoid of any moving part requiring a lubricant miscible with liquid in the system, flow of the liquid being promoted by a bubble type gas lift, and the liquid containing a minor percentage of oil which increases viscosity and, therefore, frothing and bubbling of the liquid during action of the lift to increase the efficiency of such action.

2,380,053. REFRIGERATING APPARATUS. Walter A. Kuenzli, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application

(Concluded on next page)

Ducks that Shoot Back

Long before the War, Inland technicians and chemists perfected a type of brake lining material with such uniformity of structure that every segment had the same long wear factor. Inlite was widely used as original equipment on automobiles, back in those days when a duck was something to shoot at from a hidden, marshy blind.

Today a "Duck" is still something for a hidden enemy to shoot at as it rides through the surf and up on the beaches in amphibious landings. But these Ducks shoot back!

This, then, is the true tale of landlubber brake linings developed by Inland in peacetime, and now going to sea as original equipment on amphibious craft so aptly named Ducks.

It's an example of technical development which enables the same Original Equipment Quality Inlite, serving so well on military vehicles, to perform efficiently under the rigorous conditions imposed on amphibious fighting and landing craft.

INLAND MANUFACTURING DIVISION
General Motors Corporation Dayton, Ohio

Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, Mortar Bomb Plastic Fuse Body and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.

KEEP ON BUYING WAR BONDS

INLAND Manufacturing
RUBBER, METAL, PLASTICS

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

POSITIONS AVAILABLE

SAN DIEGO, California. Wright Refrigeration Service requires first class service men at $1.25 per hour with time and half over 40 hours per week. Steady work, lots of overtime, and the best climate in America. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego, Calif.

AIR CONDITIONING and refrigeration engineer: Permanent position, excellent opportunity for right man with one of the oldest distributor-dealers in south, handling entire line of Carrier products for state. Must be able to contact prospects, layout and estimate air conditioning and refrigeration. Write Box 1772, Air Conditioning & Refrigeration News.

SALES ENGINEER: We need a man experienced in refrigeration work, with sales experience and a working knowledge of refrigeration parts and supplies. A definite postwar future and fine advancement opportunities. F. H. LANGSENKAMP CO., 229-237 E. South St., Indianapolis 4, Ind.

SALES ENGINEER: Capable, aggressive. Heat transfer, air conditioning and/or engine experience, for permanent position with large nationally known manufacturer owing to expanded acceptance of regular line of products. Acquaintance with industrial engine field desirable. Give full details first letter, experience, education, age, salary. Confidential. Box 1779, Air Conditioning & Refrigeration News.

SALESMEN WANTED: Salesmen with trade acquaintance, make good money selling surplus listings! Part-Full time. WAR SURPLUS REPORTER, 20 East Jackson, Dept. 210, Chicago.

WANTED: Individual possessing good knowledge refrigeration, practical experience, for installation mechanical equipment high and low temperature equipment nationally known Wisconsin cabinet manufacturer. Prefer party capable of assuming supervision refrigeration department. Unusual opportunity for right man. Give complete information, references, etc. in first letter. Box 1780, Air Conditioning & Refrigeration News.

SALESMEN wanted to sell nationally advertised refrigeration equipment in and around San Francisco Bay Area. Openings for industrial sales engineer; retail commercial men, and wholesale distribution men. Excellent opportunity, permanent. All replies will be strictly confidential. Box 1773, Air Conditioning & Refrigeration News.

WANTED: Engineer or shop superintendent with knowledge of production and manufacture of coils and unit coolers, with Eastern refrigeration company. Write giving full information and salary expected. Box 1783, Air Conditioning & Refrigeration News.

WANTED: Engineer or shop superintendent with knowledge of production and manufacture of coils and unit coolers, with Eastern refrigeration company. Write giving full information and salary expected. Box 1783, Air Conditioning & Refrigeration News.

REFRIGERATION PRODUCT designer and engineering consultant. Experienced in food freezer cabinets, bottle coolers, air conditioning, industrial refrigeration, etc., located in Midwest, has open time available on fee or monthly retainer basis. Box 1784, Air Conditioning & Refrigeration News.

WANTED: Application refrigeration engineer. Excellent salary and chance for advancement. Permanent position. State age and qualification. Box 1785, Air Conditioning & Refrigeration News.

SALES ENGINEER: Leading refrigeration and air conditioning equipment jobber manufacturing own line of gravity finned coils requires sales engineer for New York City. Unusual postwar opportunities with liberal remuneration guaranteed during transitional period. Replies to be treated strictly confidential should include complete background and experience. Box 1786, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

FOR SALE. Remanufactured air and water-cooled condensing units ¼ hp. up to 1½ hp. Frosted food and ice cream cabinets. EDISON COOLING CORP., 310 East 149th St., New York 51, N. Y.

DRY BEVERAGE coolers, porcelain double duty wall cases for dairy, vegetable. 4 and 6 can self-contained milk coolers. Farm freezers 7 to 20 cu. ft. self-contained. Water coolers, reach-ins, walk-ins, compressors, blower coils. All brand new. No priority. JORDON REFRIGERATOR CO., 235 N. Broad St., Philadelphia 7, Pa. Rittenhouse 6359.

FOR SALE: One only 16-hole 80 gallon Hardener and dispenser ice cream cabinet complete with compressor. Latest type. Dry expansion. Square compartments. Real buy at $450. Also, two quart self-contained Sweden Soft Ice Cream Freezer $250. New. F.O.B. Missoula, Montana. POTTER REFRIGERATION CO.

HOME, FARM freezers. New. Limited supply available. All steel construction, finished in white Duco and stainless steel tops for use in Quick-Freeze and Storage. WILSON INDUSTRIES, 3533 Holland Ave., New York City 67. OL 5-6905.

EQUIPMENT WANTED

WANTED at once. Cash waiting phone or wire. 150 new compressors any make. Will pay top price for ⅛, ¼, ½, 1 hp. PERCHAN & CO., 7719 Carnegie Ave., Cleveland, Ohio. Phone Endicott 2722.

WE NEED machines. Refrigeration and air conditioning equipment is in great demand now. A wire will bring you cash fast for used or surplus stock. Commercial, air conditioning and all specialties any quantity. E. M. FAIRBANKS COMPANY, 2548 East Tremont Ave., New York 61, N. Y.

POSITIONS WANTED

COMMERCIAL SALES manager, experienced in commercial and industrial refrigeration and air conditioning; desires position with national manufacturer or distributor having location in Midwestern area. Excellent sales record combined with administrative know-how. Business and personal references available upon request. Replies kept in strict confidence. Box 1777, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

TUNISIAN FIRM (Director, ex-sales leader of Frigidaire, Tunis). Specializing in the sale of refrigerators, having the necessary organization, wishes to make contact with important firms. Write to STAND DU FROID, Galeries du Colisee, Tunis (Tunisia).

RELIABLE FIRM in merchandising and servicing air conditioning and refrigeration equipment northern California wishes to increase lines of equipment handled. Bank and business references supplied. Box 1781, Air Conditioning & Refrigeration News.

REFRIGERATION PRODUCTS
fedders
BUFFALO, N. Y.

Write for Catalog 52

Automatic Pressure, Temperature and Flow Controls

GENERAL CONTROLS
801 ALLEN AVENUE, GLENDALE 1, CALIF.
BRANCHES: BOSTON • NEW YORK • PHILADELPHIA • CLEVELAND
DETROIT • CHICAGO • DALLAS • DENVER • SAN FRANCISCO

Air Conditioning or Refrigeration Engineer

Experienced in design, testing and processing of comfort or commercial cooling equipment. Good opportunity to advance with growing organization.

Recent expansion of laboratory and other facilities has created openings for the following:—PROJECT ENGINEERS (Heating or Refrigeration), LAB. TECHNICIANS, LAYOUT MEN, MODEL WORKERS. Airtemp Division, Chrysler Corporation, Box 1037, Dayton 1, Ohio.

KOLD-HOLD

NEW LOW SIDE PLATES

Having Greater Efficiency

Serpentine Plates for locker plants, sharp freezing cabinet liners, and beverage cooling. Streamline Truck Plates for refrigerated transportation.

KOLD-HOLD MANUFACTURING CO.
425 N. Grand Ave. • Lansing 4, Mich.

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber since 1928
Your letterhead will bring our latest catalog—also our House Organ.
"The Liquid Line"
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

MANHATTAN
WHIPCORD F/HP
V-BELTS
for satisfactory service
Important any time, but more so now! MANHATTAN Whipcord F/HP V-Belts keep home and store equipment running.
MORE POWER—grip the grooves, stop slips, uniform "pull."
LONGER LIFE—Endless cord construction resists internal heat and side wear.
SILENT RUNNING—Smooth and noiseless on high-speed drives.
THE MANHATTAN RUBBER MFG. DIVISION of Raybestos-Manhattan, Inc.
Executive Offices and Factories . . . Passaic, N. J.

Patents (Con't)

(Concluded from preceding page)

March 11, 1944, Serial No. 525,977. 7 Claims. (Cl. 211—153.)

1. A food supporting shelf for domestic refrigerators comprising a frame, said frame including a plurality of spaced recessed end members and a plurality of spaced side members connecting said end members, a plurality of individually removable non-metallic food supporting strips having their ends projecting into the recesses of said end members and being supported by said end members, and means associated with one of said end members arranged to resiliently urge said strips toward another of said end members.

2,380,256. **REFRIGERATING APPARATUS.** Carl H. Nauert, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application March 11, 1944, Serial No. 525,974. 3 Claims. (Cl. 211—153.)

2. A food supporting shelf for use in a domestic refrigerator comprising a rectangular frame including a hollow member, at one end thereof formed with a plurality of spaced openings in one face thereof, a leaf spring in said hollow member, said spring having portions thereof bent toward the openings in said hollow member, a rod extending from each end of said hollow member and bent so as to form with said hollow member said rectangular frame, a supporting member mounted on said rod opposite each of the openings in the hollow frame member, and a plurality of glass strips removably mounted on said rectangular frame with one end of each of said strips resting in one of said supporting members and with the opposite end of each of said strips projecting into one of the openings in said hollow member and with said spring urging said strips toward said supporting members.

Buffalo Forge Nets $240,019 In Quarter

BUFFALO—The Buffalo Forge Co. and subsidiaries reported net profit for the quarter ended May 31 of $240,019, or 74 cents a share, after federal income and excess profits taxes and after provision for renegotiation computed on the same basis as the completed proceedings for 1943. Renegotiation proceedings for 1944 have not been completed.

This compared with net profit of $103,545, after taxes and estimated renegotiation provision, for the quarter ended May 31, 1944, and with a net profit of $247,778 for the first quarter of 1945.

Silbar Joins R. L. Polk

DETROIT—Robert G. Silbar, for the past three years special assistant to the regional director of the Detroit WPB, has joined the creative staff of the direct mail advertising division of R. L. Polk & Co.

New Tappan Stock Issue To Finance Expansion

MANSFIELD, Ohio—Tappan Stove Co. stockholders have authorized the issuance of 25,250 additional shares of stock for the purpose of financing the postwar expansion program planned by the company.

Part of the funds acquired through sale of the new stock will be allocated to the purchase of new equipment for increased production here, it was stated. The balance will be used for the construction of a new manufacturing plant in Murray, Ky.

It was announced that the Murray plant may be operated by a newly formed corporation, to be managed by Robert M. Lamb, formerly plant superintendent for Tappan. William R. Mabee, assistant plant superintendent, will take over Mr. Lamb's duties here, with James S. LeMunyon as his assistant and in charge of the Portsmouth plant.

Announcement also was made by Keith B. Miller, general sales manager, that five of the company's field representatives have returned to their pre-war territories.

Dan J. Thomas will handle the western half of New York state; Chester A. Pridham has the state of New Jersey; West Virginia will be covered by Homer W. Smith; Roy D. Oplinger has been appointed in Oklahoma, and Harold E. Myers, the state of Louisiana.

Clayton Heads Service

RALEIGH, N. C.—M. E. Clayton is the owner and manager of Henderson's new electrical appliance service organization.

$25 Million Is G-E Net For 6 Months

SCHENECTADY, N. Y. — General Electric Co. profit available for dividends for the first half of 1945 amounted to $24,793,533, or 86 cents a share of common stock, President Charles E. Wilson announced recently. This represented an increase of 19% over the $20,770,700 or 72 cents a share, earned during the corresponding period of last year.

Net sales billed, representing shipments, during the first six months this year totaled $684,633,672 or 1% less than the $693,070,838 billed in the same period a year ago, the decrease being due principally to lower prices on war products.

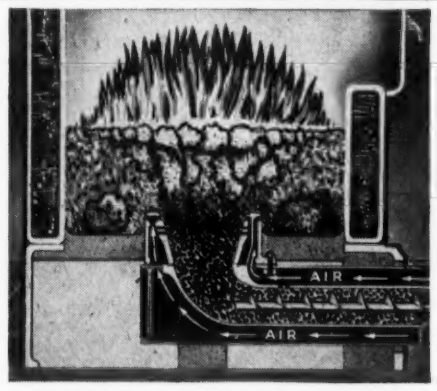
To Represent Allen-Bradley

DENVER—C. D. Belt & Co. here have been appointed district sales representatives for Allen-Bradley Co. Sales territory will include the state of Colorado, and parts of Nebraska and Wyoming.

In New Service Post

J. J. ANDERSON

Has been appointed assistant service manager of the electric appliance division of Westinghouse Electric Corp.



PROFIT POWER *in* FIRE POWER!

WITH stoker sales past the million mark, your opportunity for profits in the stoker business is here now and will continue.

Stokers have been tested, accepted. The demand for this coal-saving, labor-saving, time-saving convenience is soaring.

Profits in refrigerators, washing machines, shot skyward when a general public acceptance was won. Stoker sales are now at that stage.

It's your opportunity to cash in on this big market with the complete line of Whiting Stokers—the Stoker built from the consumer view-point—greater ***Fire Power*** at less cost. Only Whiting has the exclusive Dual Draft Burner, Smoke and Gas Eliminator and 16 other features that mean consumer satisfaction—steadily increasing sales for you.

Write today for full details on the profitable dealer franchise Whiting offers.

WHITING STOKER SALES CO.

Affiliate of Lidgerwood Mfg. Co. (Est. 1873)

11 So. La Salle Street, Chicago 3, Illinois

ANNOUNCEMENT

The Heatrex Division of Whiting Stoker Sales Company announces the availability of Heatrex Boiler Cleaner for national distribution. This time-tested product is a purgative—a complete physic for boilers. Used successfully for over 20 years in New Jersey homes, schools, churches.

Heatrex is easy to use; cleans without draining boiler, shutting off heat; corrects foaming, priming; dissolves oil, grease, rust, heat-resisting substances; prevents scale formation, pitting, corrosion. Sold in ½-lb. containers on money back guarantee.

Domestic and Industrial Stokers

WHITING (FOR FIRE POWER) STOKERS

Give any living thing the right "growth conditions," and it will flourish. Put *you* in the right atmospheric medium—temperature just right, humidity just right—and you, too, will thrive . . . just like those moulds that produce life-saving penicillin in made-to-order air by Worthington.
Today, we're getting penicillin in the quantities we need, with the help of this better air conditioning. Tomorrow, *you'll* feel better in stores, restaurants, theatres, offices, factories that use up-to-date Worthington air conditioning to put people in top spirits, top efficiency.
Since Worthington makes so many of the "vitals" of air conditioning and refrigeration systems—compressors, engines, turbines, condensers, pumps, valves, fittings—it is well positioned to study what makes air conditioning most successful . . . at lowest cost.
Many wartime applications have proved that Worthington's happy *integration* of the various components—in unit conditioners or completely-engineered systems—is extremely vital for complete success . . . a reason why *there's more worth in Worthington*. . . . for the buyer or dealer, contractor or engineer.
A get-together with a Worthington sales engineer costs nothing . . . is not binding. Let's talk things over.
Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J. Specialists in air conditioning and refrigeration machinery for over 50 years.
AS-15
YOU'LL THRIVE IN THIS "CULTURE MEDIUM"
WORTHINGTON
Air Conditioning

ou'll thrive in this culture medium" is part of a mes- Worthington delivered recently to readers of TIME, INESS WEEK and WALL STREET JOURNAL to t out that the air conditioning that helps produce er penicillin will make them, their customers and loyees thrive, too.

our business — buying, selling, installing, or operat- air conditioning — can also thrive on up-to-date thington Air Conditioning.

nce Worthington makes so many of the "vitals" of onditioning and refrigeration systems — compressors, engines, turbines, condensers, pumps, valves, fittings — it is well positioned to know what makes air conditioning most successful . . . at lowest cost.

Many wartime applications have proved that Worthington's happy *integration* of the various components — in unit conditioners or completely-engineered systems — is extremely vital for complete success . . . a reason why *there's more worth in Worthington* . . . for the buyer or dealer, contractor or engineer.

A get-together with a Worthington sales engineer costs nothing . . . is not binding. Let's talk things over.

* * * * * * * * * * * * * * * *

Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J. Specialists in air conditioning and refrigeration machinery for over 50 years.

AS. 15

Westinghouse--

(Concluded from Page 1, Column 2)

largest and best-known company in the air handling business in the United States," Ellis L. Spray, vice president in charge of the Air Conditioning and Elevator Divisions of Westinghouse pointed out.

"The uniting of Sturtevant's mechanical and air handling experience with the Westinghouse developments in air conditioning and our complete resources in the electrical field," Mr. Spray said, "will result in the most complete organization in the air conditioning and air handling industry."

The Sturtevant company's products cover a wide range in the fan and blower field, heating, cooling, and air conditioning apparatus, including application and design of complete air handling and processing systems for industry.

"The headquarters of the expanded Westinghouse Air Conditioning activities will be located at Boston," Mr. Spray said. "However, heavy-duty and industrial refrigeration manufacture will continue at Jersey City, N. J., along with production of the Precipitron.

"Acquisition of the Sturtevant company is the latest step in Westinghouse's preparations to meet post-war expansion in the air conditioning and related fields," Mr. Spray pointed out. The first step in the program was made early in 1943, and resulted in centralizing of manufacturing in the company's Jersey City plant.

In addition to its main plant at Boston, the Sturtevant company has other factories at Camden, N. J., La Salle, Ill., Berkley, Calif., and Galt, Ont., Canada. Offices and representatives are located in 42 cities in the United States and Canada.

'Ceiling' Placed--

(Concluded from Page 1, Column 5)

are being kept under ceilings that will limit their use in the free market and keep them from possibly pre-empting a disproportionate supply of freed materials at the expense of other types of production, WPB explained.

WPB plans envisage the progressive raising of these ceilings as resources are freed by military cutbacks.

Only some 125,000 to 150,000 domestic mechanical refrigerators are expected to be produced in the third quarter, however, even with priorities assistance, said WPB.

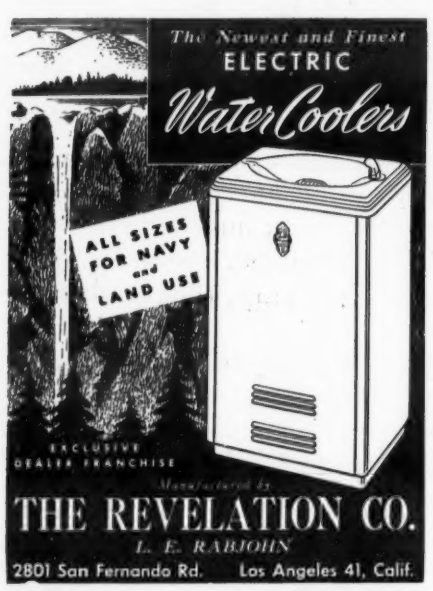
All these refrigerators which are produced in the third quarter will become part of the frozen stockpile, and not available for retail sale. In February, 1942, the stockpile was set up with 700,000 refrigerators. It now has shrunk to about 20,000 units.

When the supply meets this demand it will be possible to relax the distribution control, but no time can be set for such action as the problem is so immediately related to the progress of the war, declared WPB officials.

Material sufficient for the manufacture of 9,298 refrigerators in the third quarter, with priorities assistance, which remained after the earlier assignments of authorizations for 255,702, has been divided as equitably as possible among the 12 firms previously authorized, and as assignment also made to one newcomer in the refrigerator field, the Rohr Aircraft Corp. This firm had been engaged in war production only.

Final Third Quarter Refrigerator Quotas

Manufacturers	Previously Announced	Final Assignment
Rohr Aircraft Corp., Chula Vista, Calif.	.....	1,014
Admiral Corp., Connersville, Ind., and Tecumseh, Mich.	7,952	8,061
Crosley Refrigerator Co., Richmond, Ind.	11,067	11,434
Frigidaire Division, General Motors Corp., Dayton, Ohio	56,445	58,318
General Electric Co., Erie, Pa.	47,501	49,078
Gibson Refrigerator Co., Greenville, Mich.	8,974	9,272
Nash-Kelvinator Corp., Grand Rapids and Detroit, Mich.	27,825	28,749
Norge Div., Borg-Warner Corp., Muskegon, Mich.	14,369	14,846
Philco Corp., Connersville, Ind., Chicago, Ill., and Tecumseh, Mich.	12,090	12,491
Ranney Refrigerator Co., Greenville, Mich., Sidney, Ohio, and Tecumseh, Mich.	2,500	2,535
Seeger-Sunbeam, Evansville, Ind., and St. Paul, Minn.	25,639	26,490
Servel, Inc., Evansville, Ind.	20,272	20,945
Westinghouse Electric Corp., Mansfield, Ohio	21,068	21,767
Totals	**255,702**	**265,000**



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BELTS
You can make quick, easy sales, and count on steady business at all seasons when you sell rugged, long-lived, efficient Gilmer V-Belts.
You can count on customer satisfaction too, for Gilmer V-Belts fit—no repeat calls are necessary. And the low stretch cords assure a permanent fit.
Gilmer V-Belts are supplied in carefully chosen assortments that meet most small belt needs. Get in touch with your jobber today.
L. H. GILMER COMPANY
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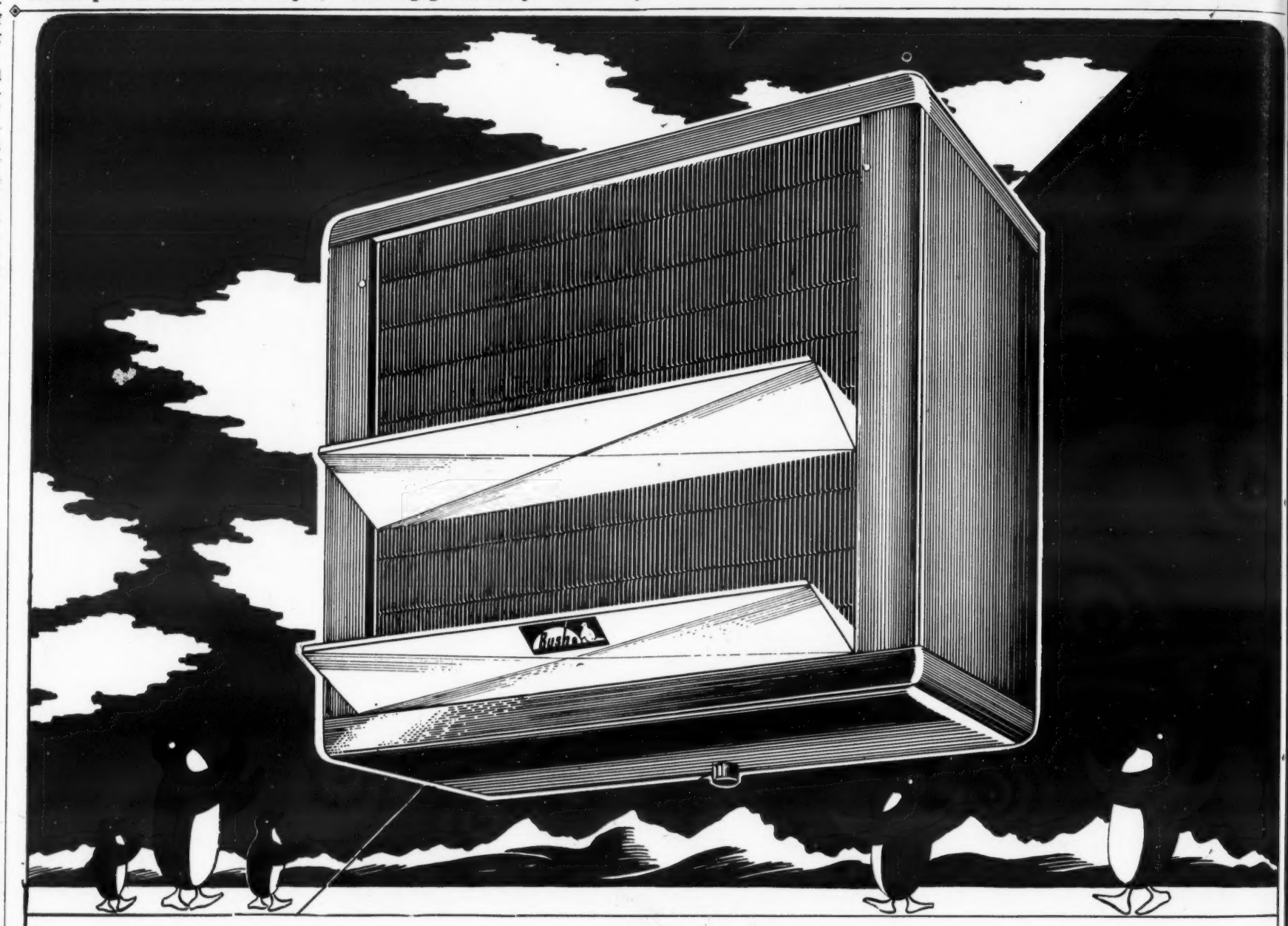
Division of United States Rubber Company



Bush STANDARD UNIT COOLERS

Bush Standard Unit Coolers have established an enviable reputation for dependability and low cost operation. New streamlined models feature casings of non-corrosive steel, finished in crackled gray, with rounded corners. There is a size for every purpose — 250 to 1800 BTU capacity. Low speed motors and kidney type fan blades assure minimum wear and noise. A well built, sturdy product unexcelled for efficient operation. Write for new Bush Catalog which illustrates and describes the Bush Standard Unit Cooler . . . and other Bush Heat Transfer Products. For advanced engineering . . . buy BUSH.

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